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RETROPERITONEAL PERIRENAL LIPOMA—REPORT OF CASE

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Of the retroperitoneal growths the lipomata are probably the most frequent. Owing to their slow growth and lack of characteristic symptoms they attain great size before their discovery. Hirsch and Wells have reported the largest growth to date. It weighed 69 pounds and at operation was found to be inoperable. It occupied the whole of the retroperitoneal space, surrounding one kidney and ureter and lying in front of the other as well as projecting between the anterior layers of the mesentery.

These lipomata may originate at any point in the retroperitoneal space. The most common sites are the perirenal fat, the fat at the root of the mesentery, or of the colon and in the pelvis. One case has been reported as originating in the mesentery of the appendix. Von Wahlen-dorf, in 132 cases, found that 79 per cent. were abdominal and 21 per cent. pelvic. Of the abdominal tumors 72 per cent. were of lateral origin and 28 per cent. median.

These tumors may be pure lipomata or mixed. In an analysis of 153 cases of retroperitoneal lipomata, von Wahlen-dorf found 46 per cent. to be pure lipomata and 54 per cent. mixed tumors—40 per cent. fibrolipomata, myolipomata and fibromyxolipomata and 14 per cent. were undergoing sarcomatous degeneration. They may also undergo degeneration and infection, large abscesses developing within them and causing acute inflammatory symptoms.

These growths are as a rule multilobular and encapsulated so that when of moderate size and otherwise uncomplicated they are readily shelled out. Those of enormous size or undergoing degeneration, with adhesion to other viscera, may present very serious obstacles to removal. Recurrence may take place and in such cases the tendency to sarcomatous degeneration is increased. In a series of 12 cases reported from the Mayo Clinic by Masson and Horgan one patient was operated upon 4 times and another twice.

The etiology, as of lipomata elsewhere, is obscure. In the case here reported there is a history, in childhood, of severe abdominal in-

jury. In the series reported by Masson and Horgan two gave a history of injury while, in two others, the lipoma originated in the perirenal fat following the removal of the kidney for stone.

The most common age at which these tumors develop is between 40 and 50 years although no age is exempt. The earliest age recorded is that of an infant of one year. They occur more frequently in females than in males.

Obviously the symptoms of perirenal lipomata depend entirely upon the size and location of the growth and result from pressure and interference of the functions of the various abdominal viscera and blood vessels. Undoubtedly for a long period of time they are silent but as they increase in size or begin to undergo degeneration the symptoms develop more rapidly and become more acute. A tumor may or may not be observed by the patient. Often the first symptom noted is an increase in the size of the abdomen with a sensation of fullness and weight. There may be pain in the back and abdomen. Interference with the gastrointestinal tract may produce anorexia, nausea and vomiting, constipation or constipation alternating with diarrhoea and, more rarely, blood in the stools. With pressure on the diaphragm there may be dyspnoea and, on the liver, jaundice. Interference with the blood vessels may cause oedema of the extremities, scrotum, ascites and dilatation of the subcutaneous vessels of the abdominal wall. There may be frequency of urination. As the tumor increases in size it may produce very serious disturbances of nutrition with consequent marked emaciation. Increase in the size of the tumor may go hand in hand with profound and progressive emaciation.

The diagnosis of perirenal lipomata is rarely made except at operation or autopsy. The infrequency of their occurrence and the lack of early and significant symptoms probably account for this fact. The most common preoperative diagnoses in the reported cases were abdominal tumor, ovarian tumor and tumor of the kidney. Malignancy was often suspected and has accounted for delay or abandonment of operation. The case reported by Hirsch and Wells had been considered to be a peritoneal carcinomatosis when first seen two years previous to operation. The presence of blood in the stools, secondary anemia and a left sided perirenal lipoma accounted for the diagnosis of splenomegaly and splenic anemia in one of the cases reported by Masson and Horgan. Peri-

renal lipoma must be differentiated from practically every type of retroperitoneal as well as intraperitoneal growth. However, an accurate diagnosis is not essential as the presence of a tumor with or without symptoms should be sufficient to entitle the patient to operative relief.

The development of symptoms in perirenal lipoma is slow; the growth is fixed and does not descend on inspiration; may be monolobular or multilobular; has a semi-fluctuant feel suggesting a cystic growth or may be tense. Unfortunately even in tumors of large size, the growth often cannot be definitely palpated owing to the intra-abdominal tension.

The x-ray with a barium meal and enema is an invaluable aid in diagnosis, showing, as it does, the displacement of the colon and thus establishing the retroperitoneal character of the growth. Urologic examination will rule out tumors of the kidney and hydronephrosis. Holmes points out the importance of determining the function of each kidney previous to operation because the circumstances may be such as to require a nephrectomy. Including the case reported by him, a nephrectomy has been required in 49 instances.

The treatment of perirenal lipomata is of course operative. The best method of approach is by the trans-peritoneal route with free mobilization of the ascending or descending colon. Inasmuch as the tumor lies within the layers of the perirenal fascia one must be sure to incise the anterior layer which lies directly behind the peritoneum. If \uparrow enucleation is carried out entirely within this fascia danger to important structures will be avoided except at the mid line where the large vessels may come in intimate contact with the growth. The enucleation of an uncomplicated case, such as the one herein reported, can be carried out with surprising ease. Growths of enormous size, however, and in those undergoing degeneration with loss of lines of cleavage, may present very serious and often unsurmountable difficulties. Here there is danger of damage to important blood vessels or adjacent viscera.

Reynolds and Wadsworth in 1906 found in the literature 49 recorded cases of which 31 had been operated with a mortality of 48.4 per cent. Since that date there has been a very great increase in the number of reported cases with a very marked lowering of the mortality. It would probably be fair to say that at present it is between 15 and 20 per cent. An earlier recognition of the condition will undoubtedly be accompanied by a further reduction in the death rate.

REPORT OF CASE

The following case is reported for the purpose of putting it on record. It represents fairly well the development of symptoms and the mistakes in diagnosis. I had never seen a case of retroperitoneal lipoma and did not give it

consideration in the diagnosis, nor recognize it as such until after the pathologic report.

H. M., male, 39 years of age (No. 15711), was admitted to the Beverly Hospital on September 8th, 1922, complaining of persistent vomiting and constant dull pain in lower back and abdomen. His family physician believed that he had a cancer of the stomach and that his condition was inoperable.

P. I. His present illness had begun about three months before with dull, intermittent pain in the lower back which radiated from side to side. This had continued, becoming more constant and more severe. About one month later it radiated to the right testicle and the scrotum became swollen, being worse at night. Shortly after onset of symptoms the appetite began to fail and there were attacks of epigastric distress coming on about one hour after eating. Bowels became obstinately constipated, not moving for three or four days and then only by catharsis. These symptoms persisted and grew steadily worse. One week before admission he commenced to have nausea and vomiting and since that time the stomach had rejected everything taken into it. There had been a loss of about fifty pounds. In spite of his illness he had been able to keep on with his work until one week before entering the hospital, since which time he had been confined to his bed. He had not noticed any increase in the size of his abdomen.

P. E. Examination revealed a well developed but poorly nourished man with sallow, almost icteric, complexion. He looked sick and his expression was anxious. Aside from his abdominal examination the findings were negative. The abdomen was moderately and symmetrically distended. On the left side and in the lower half of the right there was low pitched tympany. In the right upper half the percussion note was dull. On the left there was but slight resistance and the palpating hand could be made to penetrate deeply but on the right there was marked resistance from costal border to just below the level of the anterior superior spine. It was not, however, so much the resistance of muscular spasm as that of an elastic mass lying beneath. In the right upper quadrant, a definite, hard, slightly sensitive mass could be felt extending to the level of the umbilicus and moving downward on deep inspiration. In the right loin there was some tenderness and a sense of fullness. On rectal examination the tip of the finger just reached what felt like the lower border of a tense, elastic mass.

Laboratory Findings.—The examination of the blood was negative. Wassermann was negative. The urine was of high specific gravity and showed traces of acetone, sugar and a few pus cells and granular casts. The stomach could retain but a small portion of the barium meal and was seen by the x-ray to be crowded

high up under the diaphragm and to the left. A barium enema showed the ascending and transverse colon displaced downward and to the left. In addition, the x-ray showed an indefinite shadow on the right side which appeared to be made up of two separate masses. Owing to his enfeebled condition no urologic examinations were made.

Progress.—He was under observation a little over 48 hours and during this time he vomited

through the right rectus close to median line. There immediately presented beneath the wound a tense, grayish retroperitoneal mass which extended in every direction as far as could be felt under the restrictions imposed by the local anesthesia. The liver was pushed forward and downward and proved to be the mass which, on physical examination, had been found in the right upper quadrant. The stomach could not be seen and the ascending and transverse colon



all nourishment taken by mouth, the vomitus consisting of food and bile-stained fluid. Glucose solution was administered subcutaneously, intravenously and by rectum. The urine which was at first very scanty increased somewhat under this régime.

Operation, Sept. 11, 1922.—The preoperative diagnosis was (1) hydronephrosis or tumor of the kidney; (2) pancreatic cyst, originating in the head of the pancreas. Under local anesthesia the abdomen was opened by a liberal incision

were displaced downward and to the left. Gas oxygen was then administered and the mass was found to extend upward under the dome of the diaphragm, downward to below the brim of the pelvis, and inward to well beyond the midline. Its outer surface seemed to be soft and of uniform consistency but within there were several hard areas and one which appeared to be cystic. This latter was tapped but yielded no fluid. After incising the peritoneum and anterior layer of the perirenal fascia, the tumor,

by first delivering its upper pole, was readily enucleated. The lower pole was made up of a smaller mass which came away separately. The scanty blood supply entered the growth at the junction of the two masses. The kidney, purplish in color, firm and entirely devoid of fatty capsule, was found crowded down to the brim by the pelvis. The enucleation of the mass was accompanied by no hemorrhage or shock. A gauze drain was placed in the retroperitoneal space and the wound in the peritoneum closed about this.

Pathologic Report.—The tumor weighed 10¼ pounds and consisted of two masses. The larger mass measured 32 by 18 by 12 cm., and the smaller 19 by 16 by 7 cm.; they were encapsulated and had a very scanty blood supply. On section, minute lobules of fat exuded. The tissues were soft and yellow but there were, however, several areas which were firmer and darker in color and presented a grating sensation to the knife. Microscopic examination showed a pure lipoma, the firm dark areas showing fresh red blood cells between the fat cells.

Outcome.—The patient made a good recovery from the operation and was discharged from the hospital on October 20th, 1922. He has remained well since that date.

Conclusion.—Retroperitoneal perirenal lipomata are rare and often attain great size. They are more frequent in females than in males and between the ages of 40 and 50. They may be pure lipomata but rather more than half are of the mixed variety. They may undergo sarcomatous degeneration. The symptoms depend on the size and location of the growth and are not characteristic. Emaciation may be marked. The diagnosis is rarely made previous to autopsy or operation. The best method of approach is by the transperitoneal route. Recurrence is not infrequent. The mortality is between 15 and 20 per cent.

DISCUSSION

DR. E. L. YOUNG, JR., Boston: I thank you for the privilege of hearing about this case. It interests me because of a case which I first saw over three years ago. It was a man of fifty-one, who came to me with the diagnosis of cirrhosis of the liver and ascites. He had had swelling of the abdomen for about five years, and several physicians had made this diagnosis. When I first saw him his abdomen was enormous and as he had been losing weight, the contents must have made up nearly half his total weight. He had all the symptoms which Dr. Johnson enumerated except the jaundice, but his main complaints were constipation and prolapse of the rectum. The main thing on examination was the enormous size of the abdomen, dull to percussion and with a fluid wave.

He had been tapped but nothing obtained. Why that was not investigated, I do not know.

I assumed, as everybody else did, that it was cirrhosis; but as I read the x-ray report, it should have given me some hint. It said that all the intestines were up in the right upper quadrant except the descending colon which went down into the pelvis almost in the middle line. I tapped and did not get any fluid, and then I operated to see if an omentopexy would give relief. On opening the abdominal cavity, the same condition presented as in Dr. Johnson's case—nothing but a smooth gray mass. I made an incision from practically the pubes to the ensiform, and enucleated large masses with practically no bleeding. After a while he began to go to pieces, and I had to stop when I had taken out what seemed to be only a little more than half the whole amount. What I removed weighed almost forty pounds.

He made a very stormy convalescence with symptoms which I laid to the mechanical change in intra-abdominal and intrathoracic pressure. The mass went from the second rib on the right and the second interspace on the left. He seemed at first to be bleeding to death in his own splanchnics, and later had irregularities of pulse and respiration that were both peculiar and distressing. At this time what came out was pure lipoma.

He was in good condition until this spring, when he came back saying that his hemorrhoids were more troublesome and he thought he would have another operation. His abdomen had not increased much in size, but the pelvic engorgement was increasing. In March of this year I removed another large mass, and this time found that some of the material from the lower abdomen was whitish and necrotic looking, and the pathological report came back myxo-fibro-sarcoma. As at the first operation, his condition became very bad and I had to stop before we had removed everything, and at this time we got out a little less than twenty pounds. He was not much better symptomatically, because the pelvic pressure was not relieved, and this made him more willing to go through the third operation. This consisted in the removal of the pelvic mass and one large piece in the left flank. This unfortunately was not measured, but was almost the same as the second in amount. The total amount removed has been about seventy pounds.

The diagnosis from the pathologist the second time was mixo-fibro-carcinoma and the last time myxo-lipo-fibro-sarcoma. Dr. Hartwell, the pathologist, said the various elements were in varying proportions in the different parts of the growth. He has received two x-ray treatments so far, and is back at work. The prognosis will depend on the ability of the x-ray to hold the growth in check.

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COMPOUND CRANIO-CEREBRAL INJURIES

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THE usual discussion of fractures of the skull is concerned with the mechanism of production and the type of the defect in the cranium. It devotes but passing attention to the accompanying injuries to the brain. Any approach to this problem which is to be of clinical value must center its attention upon the brain and meninges, for the extent and character of the damage to these determine the issue.

In a paper published some little time ago¹ it was pointed out that in studying any considerable number of brain injuries one could segregate them in certain definite groups, in each of which the diagnosis of the particular damage to the brain was reasonably certain and the treatment indicated, definite. Such are the simple instances of concussion, or contusion as one might better call them, in which the symptoms are slight and fleeting and the treatment largely symptomatic. A second group includes those patients showing a progressive march of symptoms indicative of a middle meningeal hemorrhage. For these a direct attack on the bleeding vessel is indicated. A third is composed of those instances where the injury extends through the scalp, cranium and the meninges into the brain substance itself—one might almost designate these as compound fractures of the brain—and it is this particular group that I wish to discuss more in detail at this time.

The data upon which this discussion is based is derived from the records of patients entering the New Haven Hospital since the 1st of July, 1919. A total of 159 fractures of the skull have been cared for of which 14, or 9%, have suffered

a wound establishing direct continuity between the brain and the outside world. Of these 4 died, a mortality of 28 per cent.

This type of injury is, then, not unusual and is always a matter of grave concern. To the usual danger of death from extensive commotion of brain substance, from intracranial hemorrhage, and from compression by reason of secondary edema of the brain, are added the great and serious possibilities of meningitis, encephalitis or abscess induced by organisms gaining entrance through the wound.

From the nature of the coverings of the cranium the majority of such injuries fall naturally into two groups: (a) Wounds of the vault, usually lacerating as by a blunt instrument, more rarely penetrating; (b) Wounds communicating with the air sinuses of the nasopharynx and usually caused by indirect violence. The diagnosis of the type and the extent of the local wound in the first group is ordinarily not difficult, but in the second the seriousness of the injury may be unappreciated even after the most careful examination. It would be easy to pursue the classification of these wounds still further, as did Dr. Cushing in his "War Wounds of the Brain,"² but in civil life a similar abundance of material is lacking. It is important to observe, however, in the individual case, the presence of in-driven bone fragments or a foreign body or penetration of the ventricle, inasmuch as such additional involvement seriously affects the prognosis. In this series there were 12 patients with wounds of the vault and 2 in whom a cranio-cerebral injury involving the air sinuses was recognized.

The primary purpose in the handling of these compound injuries is the prevention of meningitis, encephalitis or abscess of the brain. One must then, as soon and as effectively as possible, remove the infectious material and restore the continuity of the overlying structures in such a manner as to prevent subsequent infection. This does not, however, imply the necessity of operating at once, when the patient is in shock or moribund, nor does it, I think, indicate the advisability of operating immediately upon those in whom the prognosis is otherwise grave. To do so only adds discomfort and expense to the patient's family and oftentimes discredit to the surgeon. From experience in the matter of primary suture gained during the late war it is known that wounds thoroughly débrided and sutured in the first six hours heal per primam in something over 90%, while the delay of 12 hours adds not more than 10% to the number that will break down. It takes, then, in most instances from six to twelve hours for the infective agent to establish itself in the tissues in such a manner that it cannot be eradicated by thorough débridement. During this time the surgeon will have had ample opportunity to make a thorough and comprehensive examina-

tion and will have observed the trend of events as indicated by the temperature, pulse, blood pressure and the changes in consciousness. Most instances of intracranial bleeding from the larger vessels will have become apparent and the proper treatment instituted. The surgeon should have been able to arrive at a fairly accurate estimate of the severity of the general damage to the brain and particularly to the basilar centers. Many patients will have died from the extreme commotion and others will be moribund. An early rapidly rising pulse with a falling blood pressure and—most important of all, as pointed out by Courtney—an early hyperpyrexia are of the greatest import and, I believe, indicate that all operative procedures will be futile.

In some instances the prognosis as regards the general damage to the brain will still be in doubt, and it goes without saying that these should be given the benefit of this doubt, and the repair of the local injury proceeded with. One must be guided in this matter by the evidence of general damage and not by the extent of the local injury. All surgeons of experience can recall instances of the most appalling local damage which have gone on to recovery. It is interesting to note in this connection that of the 14 patients suffering from compound fracture of the skull extending into the brain, 2 succumbed to the injury within six hours and 1 within 14 hours after the accident. Of these, one was operated upon in the belief that there was a possibility of recovery. In no instance in this series, however, was operative interference postponed beyond the twelve-hour period of possible delay. In other words, although one patient was operated upon uselessly, none suffered by neglect as the result of the conservative stand that was taken.

If such a wound is not properly cared for within this latent period or shortly thereafter, it is well understood that a majority of the patients will die. If a cerebro-spinal fluid leak has been established, either from the ventricle or the subarachnoid space, and finds its way outward through an acutely infected wound or by way of the nose or the pharynx, a ventriculitis or meningitis is almost inevitable. Fortunately in most instances the ventricle is not penetrated and in many others the meninges become adherent—their faculty for doing this being as great as that of the peritoneum—and the widespread meningeal involvement is avoided. However, the contused and damaged cortex which is in direct continuity with the infected wound serves as an ideal medium for the growth of organisms which may produce an encephalitis. The spread of this may cause death or if, fortunately, it remains localized to the region of the damaged tissue, may lead to edema and bulging of the brain through the cranial defect, the much dreaded fungus cerebri. If this is not

treated in exactly the proper manner it usually becomes progressive with greater and greater herniation and an increasing amount of encephalitis, until the patient succumbs. Lastly, the cortex may become walled off from actual contact with the external wound previous to the development of the infection. Then at some later time the damaged area in the brain may be converted into an abscess as the result of infection from the long-continued suppuration in its close proximity.

The imperative indications for the operative procedure necessary in this type of injury are as have been stated before; first, the removal from the wound of material carrying infection; secondly, the removal of tissue so damaged that it cannot resist infection and, thirdly, the closure of the pathway from the external world to the brain in such a manner as to prevent future infection.

We better know today as a result of our present understanding of débridement and primary suture and in particular their application by Cushing to cranio-cerebral wounds in what manner to approach the problem in an operative way. The principles are few but rigorous; the removal of the wall of contused and contaminated tissue in as far as possible "en bloc"; the discarding of instruments when contaminated and it might be added that inasmuch as fingers cannot be readily discarded they should be kept out of these wounds; the closure of the wound accurately and thoroughly so as to obtain the earliest possible per primam healing.

The operative procedure is always major in character and should be approached with all the facilities available. It should be unnecessary to say that it ought not to be attempted by a junior member of the staff or in the accident room. In most instances the entire operation can be carried out without the least difficulty by means of infiltration anesthesia, in our clinic $\frac{1}{2}$ per cent. novocaine. Occasionally with a patient who is delirious or in an excitable state, ether may be necessary but it should be avoided if possible.

The wound in the scalp is lightly packed with gauze saturated with alcohol or tincture of iodine. The entire scalp is then moistened with green soap and shaved without the preliminary use of clippers or scissors. This removes, if carefully done, in the most effectual manner the gross dirt and blood, and a scrub with green soap followed by alcohol and bichloride solution completes the preparation. The original tampon in the wound is now removed and replaced with a second of the same nature. The wound in the scalp is excised "en bloc" with the knife and incisions made, curvilinear or of the "Isle of Mann" type in such a fashion as to enable one to lay back the scalp with a wide exposure of the underlying bone. The portion of this which may have been contaminated is carefully

kept away from and multiple perforations are made about it with the Doyen or Hudson burr. These are connected by means of the De Vilviss or Montenevsi forceps and this area of bone lifted out "en bloc." It is extremely important that this incision be placed in the bone outside of the possible area of gross contamination and over intact dura. It is necessary to bear in mind at this point that the primary requisite is a procedure which is life saving and that the cosmetic result is relatively unimportant. It is also well to recall that control of intracranial bleeding is simple with adequate exposure, but well-nigh impossible otherwise. Therefore a sufficiently ample area of bone should be removed in order to insure the fulfilment of these requisites. Depressed bone with adequate blood supply may be elevated, but all free fragments of bone in which the blood supply is gone and which lie extradural, should be gently lifted out and removed, inasmuch as this is neither the time nor the place to attempt even autogenous bone-grafts.

The care of the lacerated dura is governed by the fact that it early becomes adherent to the subjacent meninges and such adhesions should be disturbed as little as is possible. The edges rarely need excision except where there are free tags hanging in the wound. When the delay has been short and the approach free from contamination, it may be advisable to enlarge a dural perforation in order to more thoroughly evacuate a subjacent blood clot or the pulped brain tissue; but the occasion is rare when this procedure is expedient.

The treatment of the damaged cortex is directed toward the removal of dirt and devitalized tissue, and foreign bodies such as in-driven bone or missiles. The second should not be searched for until the first has been accomplished, for the exploration should be carried out through as clean a wound as possible. The pulped and contaminated brain may often be extruded by having the conscious patient gently strain or cough. It is then washed away with a jet of Ringer's solution, which should be kept playing in the wound throughout this stage of the procedure. Many times by this simple method most of the debris can be removed and the gentle exploration of the cortex with a fine soft rubber catheter through which the salt solution is flowing will complete the cleansing. At the same time this will often enable one to locate in-driven fragments of bone or a foreign body. These should be very gently lifted out with fine forceps and this method of examination carried on until nothing more can be found. Only as a last resort should the bare finger be introduced, and then with exceeding gentleness. The operator must be certain that he does not increase the contamination and laceration of the cortex by his own manipulations. His every move should be purposeful and gentle.

The closure is effected by the careful suture of the scalp in two layers, so carefully done that there can be no leakage and so accurately approximated that healing will be per primam. A small rubber tissue wick, to be removed in 24 to 48 hours, is placed at one angle and serves two purpose,—the one to give exit to the oozing of the immediate post-operative period, the other to provide for the early recognition of infection, for on removal a study of a stained smear is made and also a culture.

The first evidence of infection must be countered by laying the wound widely open, and adopting treatment as for a fungus cerebri. No gauze must come in contact with the brain substance. It is covered by protective tissue which is removed every 24 hours and the wound gently washed with a stream of Ringer's solution. No pressure must be allowed on the herniating cortex and the dressing is built up about it with a "doughnut" so that there can be no compression. By these simple measures at least 50 per cent. of the infected wounds will recover. Of nine operations of this type only one wound had to be opened up, with the consequent formation of a fungus cerebri. With this conservative treatment the patient survived and was discharged well.

In a paper of this length it seemed advisable to dwell only upon the methods of procedure and the general results, rather than upon a detailed analysis of the cases.

Out of the 14 patients under consideration, four died. All of these were in the group of fracture of the vault. Three were very apparently moribund on entrance and operation was out of the question. The fourth had a traversing gunshot wound of the cranium in which it was thought that intracranial hemorrhage demanded immediate operation. He died on the table and his death was undoubtedly due to extreme commotion of the brain from the missile.

One patient, a boy with an extensive bursting fracture of the skull—a large cabinet had fallen upon his head—had a small perforation from within outward in the left occiput with extrusion of a small amount of cerebral substance. This wound was carefully cleansed and dressed, it being felt that operation was inadvisable because of his serious general condition. The decision seems to have been correct, for he recovered and was discharged well from the hospital within three and one-half weeks.

Seven patients were operated upon, all within six hours of the injury and six healed per primam. An eighth operated upon in less than four hours became infected and, as has been previously stated, recovered after a period of suppuration.

Two of the fourteen patients belonged in the second group of injuries, that is, those communicating with the air sinuses of the face. In the first instance a young man, aged 21, had been

thrown from an automobile, striking with his forehead against a telegraph pole. The lower half of the frontal bone including the frontal sinuses was smashed in and brain was freely oozing from a large lacerated wound in the frontal region. The débridement was modified to the extent of exenteration of the frontal sinuses and drainage extradurally over the orbital plate as far back as the apices of the orbits, for the fracture was also compound into the ethmoid cells in this vicinity. He recovered following a mild suppuration of the drainage tract and was discharged from the hospital well.

In the second instance, the patient, a boy of 6, met with an automobile accident and sustained a bursting fracture of the skull, the cranial substance exuding from the nares. His condition for days did not permit any operative interference, had it been advisable, otherwise; but much to our surprise he recovered and left the hospital well.

In conclusion, of the fourteen patients suffering from compound cranio-cerebral injuries, nine were operated upon and eight survived, none dying from infection. Of the five not operated upon two survived, the three deaths being due to extensive commotion of the brain. In other words, under the methods of treatment developed during the late war no case of a compound cranio-cerebral injury admitted to this clinic in over four years has died from meningitis, encephalitis or brain abscess.

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DISCUSSION

DR. LUCIUS C. KINGMAN, Providence: I think we are to be congratulated on hearing this very definite procedure in these cases outlined to us by Dr. Harvey. It has been in the past a very hazy treatment that most of these cases have received. Fracture of the skull has come to take a more prominent place in the cases we see at the general hospitals than it used to; first, on account of the automobile; and second, on account of the more accurate diagnosis by means of the x-ray we are picking up cases that were formerly unrecognized. At the Rhode Island Hospital from the first of 1920 we have had a total of 271 fractures of the skull. Of these 20 were compound, compound in the sense of the term as used by Dr. Harvey. The mortality was 38.7 percent; that is, 105 died. Of the compound cases, 20, six died, or 30 per cent. mortality. Of these 271 forty-eight were complicated by other injuries, that is, the skull fracture was simply part of a general smash-up; and of these 22 died or nearly 50 per cent. Of the compound two were bullet wounds of which one died and one lived, neither of them operated

upon. Of the simple fractures, 13 only were operated upon of whom seven died and six lived. So that subtracting 13 we get over 250 cases untreated surgically. Of the 20 compound fracture cases 13 were operated upon, of whom seven died and six lived.

The big problem with us is the treatment of these non-compound cases. The simple fractures at the present time are usually untreated except for general nursing and care.

Original Articles

AN ANALYSIS OF FOUR HUNDRED
CASES OF EXTRA-UTERINE
PREGNANCY

BY NATHANIEL R. MASON, M.D., F.A.C.S., BOSTON

AND

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THIS paper is written with the idea of presenting the results of an analysis of a considerable number of cases of extra-uterine pregnancy, and has been prepared after a study of 400 cases occurring in the Gynecological Clinic of the Boston City Hospital, over a period of twenty years.

All these cases were proven extra-uterine at operation, and while the histories were taken by various men and the operation performed by different surgeons with the varying technique of two decades, still the data available are quite comprehensive and afford some interesting observations.

Dealing first with the history, the most striking point is the almost invariable irregularity in catamenial flow. This ranges from a simple cessation of menstruation to hemorrhage requiring the use of several napkins a day. The patient may not show any sanguineous discharge at the time of examination, but careful questioning will usually bring out the story of the appearance of a greater or less amount of some inter-menstrual period. In this series 89.5 per cent. gave this history while at examination but 66.8 per cent. showed evidence of bleeding. The duration of this flow varies greatly. A few presented the history of flow for 24 hours or less; a few more had had bleeding for a week, but the vast majority had been bleeding irregularly for between 2 and 4 weeks, while a rare case told of bleeding for between 2 and 3 months. A small number, who had considered themselves normally pregnant, had started a flow by attempted abortion by introducing a foreign body into the uterus.

The onset of the flow may appear at any time as merely the continuation of a normal period, or, after an amenorrhea of from a few days to a few weeks.

The relatively small number, who had no menstrual disturbance beyond cessation came into the hospital because of pain.

This pain is, however, usually present, occurring in this series in 354 cases or 88.5 per cent. Forty-one cases complained of pain for one day or less, 94 between one day and one week, 156 from 2 to 4 weeks, 45 from 1 to 2 months and 4 from 2 to 3 months. The pain varies as described by the patient from a dull ache to a sharp stabbing pain localized usually to the lower abdomen and to one side or the other, but sometimes extending throughout the entire abdomen. The onset of the pain, usually so sudden in its character is thought to be co-incident with the irritating contact of fresh blood against the peritoneum, as the blood escapes from the wounded tube into the peritoneal cavity, and owes its exacerbations and relapses to the activity or quiescence of this hemorrhage. Thus the slow leakage from a tubal abortion may spread its train of symptoms over a period of weeks, while the acute rupture prostrates its victim from the beginning with all the signs of shock and hemorrhage, as classically illustrated by the weak thready pulse, the pallor, restlessness, air hunger, thirst and shallow respiration. Frequently the initial collapse is accompanied by fainting. This phenomenon occurred in 15 per cent. of the series and was usually diagnostic of a considerable amount of blood loss. However, in the nervous neurasthenic type of case this symptom may have to be discounted as an apparently very mild attack of pain may give rise to syncope.

Vomiting is again a fairly common symptom occurring in 40 per cent. of our cases and was accompanied by fainting in 6.8 per cent. The two occurring together seem to indicate a rather considerable amount of peritoneal irritation.

Pain on defecation, which some authors consider of marked importance, occurred but rarely in this series and was not apparently a symptom of very great prominence.

If we may turn now for a moment to what we may call the social history, the records furnish some rather interesting figures.

The age incidence follows very closely the usual curve of child-bearing. The youngest patient was 18; the oldest gave her age as 47. Fourteen per cent. were between 20 and 25; 31 per cent. between 25 and 30; 31.8 per cent. between 30 and 35; and 18.1 per cent. between 35 and 40. The ages of the remaining 5.1 per cent. were not recorded.

The marital state was noted in 356 cases. Of these 1.4 per cent. were widows and 7.0 per cent. in single girls; a total of 8.4 per cent. of illegitimate pregnancies. This last type of case

must in the natural course of events be much more exposed to, and much more liable to be infected with venereal disease than the woman whose intercourse is probably less promiscuous. To be sure these cases do not often show clinical evidence of inflammatory disease, but it seems quite plausible to believe that such a condition may have been present in the past and may be an important etiological factor.

In wedlock, taking the figures from the standpoint of years of married life, the results are not very remarkable, corresponding again quite closely to fecundity charts.

Again in parity, it would seem that the question of infection either as a direct result of intercourse or as a sequel to pregnancy is hinted at. Of 387 cases noted, 27.6 per cent. were pregnant for the first time; 24.8 per cent. had had one previous pregnancy; and 21.4 per cent. were in their third parity; a total of 73.8 per cent. who developed their extra-uterine pregnancy before their third parturition. Apparently those cases who had had any questionable inflammatory condition, or in whom some congenital defect made extra-uterine more probable, had either become normal or had been weeded out in one of the first three groups. The success of a given ovum in reaching normal implantation in the uterus renders more propitious the chances of the succeeding ones.

Miscarriages were noted in but 28.8 per cent. of the series. Of this total 49.3 per cent. had had one miscarriage; 29 per cent. two and 10 per cent. three, the remainder 4 to 7. Induction was admitted in but 5 cases. In the early years the Wassermann reaction was not done and so we have no definite idea how great the incidence of syphilis may have been.

The history of a previous laparotomy was obtained in a rather large number of cases (11 per cent. of the entire series) and 3.5 per cent. had had a previous operation for extra-uterine. The importance of these figures will be more fully discussed later in connection with the question of adhesions as a concomitant finding at operation.

Turning from the history to the examination of the patient, we find the usual train of symptoms which have been recognized and discussed for years. However, it may be worth while to recapitulate these with our present figures in mind.

The temperature was subnormal in most cases which had suffered a considerable amount of blood loss and to a certain extent is indicative of the degree of shock and hemorrhage. In our series 8.5 per cent. showed a temperature between 96-97; 13.7 per cent. between 97-98; a majority, 57 per cent., between 98-100; 18.6 per cent. between 100-102; and a small number, 1.8 per cent. above 102. As far as could be determined these latter cases had no source of temperature extraneous to their pelvic condition.

They were usually cases of some duration and it is possible that infection of the extruded blood clot may have occurred either by bacterial invasion directly from the adjacent colon or from some other source. Cultures taken from these cases at time of operation showed a growth, resembling colon bacilli, in but few instances.

The pulse followed the temperature very closely but the large number without elevation is rather surprising. Fifty-six and three-tenths per cent. had a pulse of under 100 and 28 per cent. between 100 and 120. Only 11.6 per cent. were between 120 and 140 and but 4.1 percent. above 140. Of course, the acute ruptures with considerable hemorrhage showed the higher rates, but it is remarkable to note the amount of blood which could be slowly spilled out into the peritoneal cavity without much pulse reaction. A weak, thready pulse occurred much more frequently than simply a rapid one.

The respirations were not much disturbed except in cases of acute rupture where they were quite consistent with the amount of shock and hemorrhage present.

The blood pressures, which unfortunately were only reported in a limited number of cases, were likewise found to coincide closely with the shock and hemorrhage. Hemoglobin readings were taken by the Talquist method in 161 cases. Of these, 5.5 per cent. were 40 or below; 11.2 per cent. showed 40 to 60; 64.5 per cent. were a low normal (60 to 80) and 18.6 per cent. showed no diminution whatsoever, being between 80 and 100. The slow, but long continued leak apparently reduced the hemoglobin much more than did the quick sudden gush and although the latter might seem more profuse, the hemoglobin ratio showed no change until some later period.

However signs of acute hemorrhage as evidenced by pallor, restlessness, a weak, thready pulse, and a sighing respiration are not as common as one might be led to suppose, being observed in but 103 cases of our series.

Another sign of bleeding, sometimes doubtful in its interpretation, is shifting dullness in the flank. When this can be definitely ascertained in the absence of ascites or other complicating factor, it is a good indication of the intraperitoneal loss of a considerable amount of blood.

As far as concomitant signs of pregnancy are concerned they can be very little relied upon. Softening of the cervix was noted in but 145 of our cases, and changes in the breast or blueness of the vagina were noted in but very few.

Abdominal tenderness is another of the most striking signs. Abdominal tenderness was present in 322 cases, or 80.5 per cent. Of these 322 cases, 42.2 per cent. localized the tenderness in one or the other lower quadrants, dividing it in the ratio of 41.9 per cent. to the right and 58.1 per cent. to the left. A considerable number were tender throughout the lower abdomen

without localization. This class embraced 38.1 per cent. of the 322. The remaining 19.5 per cent. of those classed as showing abdominal tenderness were unable to say that one point was more tender than another, pressure over any area causing them more or less pain.

True spasm was recorded as present in but a small proportion of the series, 18.2 per cent.

Distention was a feature in 37.2 per cent. and was apparently due to a minor degree of intestinal paralysis from intraperitoneal blood clot irritation of some little duration.

An abdominal mass was palpated in 12 per cent. of the cases and was localized in most cases to one or the other flank, those on the right occasionally offering some difficulty in the differentiation from an appendix abscess.

Turning to vaginal examination we find the data of considerable value. Softening of the cervix, as noted above, was present in but 36.2 per cent., a somewhat lower percentage than would be expected when we take into consideration the frequency and value of this sign as a common indication of pregnancy. Bleeding was noted in 66.8 per cent. This bloody discharge was usually darker in color and more viscid than the normal menstrual flow and varied in amount from slight staining to a fairly free hemorrhage. The presence of dark blood with clots is of considerable diagnostic value.

A mass could be felt per vaginam in 84.7 per cent. of the cases. The right vault was involved in 28 per cent., the left in 33 per cent. and the posterior cul-de-sac in 26.5 per cent. Eight and five-tenths per cent. showed involvement of all three and the remaining 4.7 per cent. were simply described as "a mass in the vault," and hence cannot be further classified. Six and two-tenths per cent. of the whole showed tenderness and resistance but nothing which could be called a mass.

Slight uterine enlargement was noted in 21 per cent. and "a questionable enlargement" in 3.5 per cent. of the cases.

In a certain number of cases where there was no apparent acute emergency and where vaginal examination was unsatisfactory through lack of cooperation on the part of the patient, either because of pain or apprehension, it seemed advisable to secure thorough relaxation by means of an anesthetic. Both gas and ether were used, either being acceptable so long as the requirement of complete relaxation was fulfilled. By this means a much more thorough and complete pelvic examination could be made and questionable masses either felt definitely or found not to exist. However, great gentleness in pelvic examination is demanded whether or not the patient is under an anesthetic. Roughness not only unnecessarily hurts a conscious patient, thus making a satisfactory examination much more difficult, but also carries with it considerable danger of starting afresh quiescent

bleeding, by dislodging the hemostatic blood clot.

Turning now to the treatment of these cases, we find that they fall into three classes. First, those cases which show marked signs of shock and hemorrhage and are not good risks for immediate laparotomy. Second, those which show definite signs of hemorrhage but are still in good operative condition; and third, those which do not show signs of active bleeding and in which the diagnosis may be doubtful or obscure.

Of our entire series, 2.2 per cent. fell in the first class. These nine cases were given a few hours delay with vigorous stimulative treatment and allowed to recover from shock. This treatment consisted in raising the foot of the bed, heaters and blankets, saline solution either by hypodermoclysis or intravenously, and blood transfusion if available. It seems certain that the blood transfusion is the most valuable of all and should be employed whenever possible. The blood may be used either by the citrate method or by some whole blood method such as the Kimpton. In addition, hot shock enema of black coffee and brandy were given with good results.

If no improvement is noted in 3 to 4 hours it can be assumed that bleeding is still going on and laparotomy performed regardless of the condition of the patient.

Of our nine cases treated in this manner, but one died, a mortality of 11.1 per cent. While of 9 deaths recorded as from shock and hemorrhage but one had been treated by delayed interference. On the other hand, of 118 cases operated on immediately but 9 died from "shock and hemorrhage," a mortality of 7.6 per cent.

The second class of cases, those which are still in good condition, should be treated by immediate laparotomy under ether anesthesia.

One other diagnostic point which we deem of great importance may well be brought up at this juncture. In those cases with a high temperature and white count and a bulging mass in a vault, where the question of pelvic abscess is prominent, puncture with a large calibre needle, through the posterior cul-de-sac, will usually solve the problem. This is best done after the patient is prepared for operation and is under ether. The presence of pus will of course obviate the necessity of a laparotomy, while a flow of dark blood verifies the diagnosis of extra-uterine. This preliminary diagnostic procedure of vaginal puncture may save the patient's life, by avoiding a contemplated laparotomy and the contamination of the peritoneal cavity with virulent pus. In those rare cases in which the mass is high up or so firmly clotted as to fail to run through the needle, the absence of pus will rule out a pelvic abscess but will occasionally cause some confusion with a diffuse pelvic inflammation. However, the almost uniformly good results seem to warrant vaginal puncture being done in all cases of suspected extra-uterine pregnancy, in which there is a bulging vaginal mass

with the sensation of fluid, which may be blood or pus.

The third class should also be subjected to laparotomy when a diagnosis is at last arrived at. Some of these cases will doubtless be done under the head of an exploratory operation and some will be discovered while operating for other causes, as for instance a chronic salpingitis or even fibroids. Occasionally too, the other mistake will be made and a case thought to be extra-uterine will turn out to be salpingitis.

However, the technique of laparotomy is approximately the same for all cases.

Resection of the tube does not seem to be demanded and as exsection in the majority of cases is the easier and quicker operation, it is strongly recommended, the remaining tube, if undamaged, being sufficient on which to rely for future pregnancies. The 3.5 per cent. of cases who return for a second extra-uterine in the remaining tube, while a rather large proportion, does not seem large enough to warrant the removal of the second tube and the blighting of further hope of children.

The removal of blood clot depends a good deal on the patient's condition. If she is all right, the time to pick it out may be well spent as blood certainly forms an excellent culture medium. If on the other hand, the patient is in poor condition, the probability of absorption with only moderate pyrexia in the convalescence, is strong enough to warrant quick closing without wasting valuable time hunting for blood clot.

Oozing can usually be readily and completely controlled by pressure. Occasionally, especially in an abdominal pregnancy, the torn adhesion areas or sites of secondary placental implantation persist in oozing whenever the pressure is removed. These cases are best treated by packing firmly with gauze and leaving this pack in place from four to five days and then withdrawing it gradually over a period of a day or two.

Unless there is excessive oozing or the case is an old one with high temperature and a suspected possibility of infection, the abdomen should be closed without drainage. Blood clot makes the best of culture media and it seems unwise to us to leave any avenue by which infection may gain access. In case infection is suspected, the ordinary cigarette rubber dam wick is the drain usually employed. Our series showed 95 cases drained abdominally, 77 vaginally and 9 from both above and below. Of 19 cases dying of peritonitis, 11 had been drained and 3 had not.

This question of vaginal drainage brings us to a consideration of the subject of the vaginal operation. Eighty-six cases, or 21.5 per cent. of our extra-uterines, were opened by posterior colpotomy. These were all drained. Of this number, 5 required secondary laparotomy to stop

bleeding, as against one case opened from above which required a secondary operation. This secondary laparotomy in the vaginal cases had a mortality of 40 per cent. The cases on which colpotomy was done were chiefly the older ones where it was felt that some walling off by adhesions had taken place. There were several, however, which were acute cases and a few where resection of the tube was performed through the colpotomy incision. Packing to control oozing was done in all these cases either with plain or iodoform gauze. They then required frequent repacking or drainage by tube or by daily dilatation of a rapidly-closing sinus.

The average convalescence in cases opened per vaginam is 21.9 days against 18.8 days for those done through the abdomen. The few cases opened both through the abdomen and through the vagina come between with an average of 20.8.

Pelvic examination at discharge in cases done by laparotomy showed thickening in 120 cases and a negative pelvis in 150. Posterior colpotomy, on the other hand, had thickening in 50 instances against 13 that were negative. The results in those in which both the abdominal and vaginal incisions were made showed a negative result in 2 and a thickened pelvis in 9. In the remaining cases the condition of the pelvis at discharge was not noted.

Accordingly it seems to us that the vaginal operation except in old questionably infected cases, is less satisfactory than the abdominal, both from the viewpoint of immediate control of hemorrhage, the duration of convalescence with the attendant frequent drainage dilatation and the condition of the pelvis at discharge.

Post-operative treatment has been approximately the same throughout the two decades and has apparently stood the test of time. The patients were made comfortable with morphine, given hot coffee enemata if in shock and hot rectal tap water injections under any condition. In the earlier years, subpectoral saline was given by hypodermoclysis if the need for fluid was marked. Salt solution was also given intravenously if the need was very marked. In the later years transfusion was employed, where the evidence of loss of blood was extreme and shock was pronounced. One other practice used little of late years was to fill the peritoneal cavity full of warm normal salt solution before closing the abdomen. Why this has been discontinued is not very clear as good results were obtained with it. The foot of the bed was usually elevated in those cases which had suffered a considerable loss of blood. Warmth and quiet were insisted upon and a moderate amount of warm fluid was allowed by mouth as soon as the patient complained of thirst. Later, drains were started about the fourth or fifth day and removed little by little or occasionally completely on the first attempt.

The time of opening the bowels varies with the different men in charge. Some started a calomel course followed by magnesium sulphate in 48 hours, while others waited 4 to 5 days. As far as could be told from the records, this factor had little influence on conditions in general.

The surroundings are important and whenever possible the patient should be placed so as to get the maximum amount of fresh air and sunlight. If open air as in a screened porch is available, so much the better.

General tonics, iron in some form and whiskey were all used with good results.

From a pathological standpoint, the figures of our series present some interesting facts. On opening the abdomen, the diagnoses in 260 cases were immediately given supportive evidence by the finding of free blood. This varied in amount from a slight staining of the tissues to amounts of blood and clots roughly estimated at "a quart."

In 75 cases the extra-uterine pregnancy was found to be a tubal abortion, the right tube being affected in 37 and the left in 31; seven cases specified no side.

Ruptured tubes were found in 167. Of these 67 were on the right and 44 on the left. The right tube cases were divided into 8 in the outer third, 6 in the middle and 10 in the inner third. On the left, 13 were in the outer, 5 in the middle and 10 in the inner. The remainder were not classified as to position. Two were labelled "interstitial."

One case of ovarian pregnancy developed to practically full term.

A rather large number of cases showed evidence of other abdominal pathology besides extra-uterine. Of 193 cases recording this condition, cystic ovaries were found in 20, more or less inflamed appendices in 19, and adhesions in 60. Salpingitis of the opposite tube was noted in 17 and a fibroid uterus in 2. An admixture of two or more of the above occurred in 74.

Apparently the presence of pathology outside the affected tube is very common and may quite possibly be a causative factor in the extra-uterine pregnancy. The especially large number of adhesions presupposing previous low-grade intra-abdominal inflammation probably from the tubes or an irritation from some other source goes very well with the above-mentioned factor in the Social History of venereal exposure and resulting low grade, frequently not treated, inflammatory changes in the tubes and surrounding tissues.

The reports of microscopical examinations were given in 308 cases and of these 250 showed chorionic villi and 58 did not.

Of 31 cases (7.7 per cent. uncorrected mortality) lost in this series, the cause of death was divided as follows: Peritonitis comes first with 14, then "shock and hemorrhage" with 11, ileus had 2, bronchopneumonia, pericarditis,

and acute cardiac dilatation 1 each. One case died almost immediately on entrance to the hospital and was diagnosed at autopsy.

Of the peritonitis cases, 10 were drained abdominally, 1 both abdominally and vaginally, and 3 not at all. The case drained both ways had been opened first by posterior colpotomy and then a secondary laparotomy was performed for the control of bleeding.

Six of the shock and hemorrhage fatalities followed laparotomy, one followed a vaginal section with a secondary abdominal section, because of hemorrhage, and one as noted above died on entrance without operation.

NOTE: 86 cases of posterior colpotomy done with secondary operation in 5. Mortality of the 86 inclusive, 1.3 per cent. Mortality of the 5, double operation cases 40 per cent., these cases being 5.8 per cent. of the 86. Mortality from primary lapse 7.6 per cent.

In summing up, the points to be stressed are:

First, the probability of a low-grade intra-abdominal inflammatory condition with resulting adhesions playing a large part as the causative factor in most cases.

Second, the fact that immediate operation without regard to the condition of the patient offers the best chance in cases of acute rupture and that operation should be done in all cases as soon as feasible after the diagnosis is made.

Third, the inadvisability of abdominal drainage except in old cases thought to be infected or in cases of oozing which could not be controlled in the usual manner.

Fourth, the advantage of the abdominal over the vaginal route of operation, especially as regards the control of hemorrhage.

A RARE MALIGNANT TUMOR OF THE RADIUS

BY H. QUIMBY GALLUPE, M.D., WALTHAM, MASS.

THE work of Drs. Codman, Mallory, Bloodgood, and Ewing during the last several years, on bone tumors, has stimulated interest in the diagnosis and treatment of them, and the tabulation of the cases, so that the treatment and the prognosis of other later cases may be more definite. The following case presents a very rare tumor, and for that reason seems worthy of presentation. It seems best to present the complete history in chronological order for better understanding of what happened to the tumor and to the patient.

July 18, 1921. Mrs. V. L. M. entered the O.P.D. of the Massachusetts General Hospital (No. 445939), (Case 12621 in the Registry of Bone Tumor), complaining of pain in the left wrist, without history of injury. Examination revealed tenderness and some swelling at the lower end of the left radius. A temporary diagnosis of Tb. abscess was made, and the

patient referred to x-ray for films. A plastic wristlet was applied. X-ray Diagnosis: In the lower end of the left radius is a definite area of diminished density without evidence of regeneration or any deformity of the bone outline or any periosteal change. Suggests Tb. Lower end of the ulna appears underdeveloped with the absence of the styloid, and some loss of density. Some abnormality in the shape and relations of the semilunar and the cuneiform. The anterior border of the articular surface of the radius is slightly irregular. (X-ray print No. 1.)

August 4, 1921. Admitted to the Orthopedic Service of the Massachusetts General Hospital (No. 244553).

C.C.:—Left wrist painful for two months.

F.H.:—No Tb. One child, and no other pregnancies. Child and husband living and well. No cancer in the family.

P.H.:—Measles and whooping cough in childhood. Diphtheria. A mild cystitis a year ago this time, which was soon recovered from.

P.I.:—Four months ago noticed that the left wrist was painful. Several liniments were used at the time without relief. There was no injury that the patient could recall. It has become rather worse than better since then. Recently a swelling has occurred. Referred from the O.P.D. with the diagnosis of Brodie's abscess or Tb.

P.E.:—A well developed and nourished young woman without any apparent pain. The examination essentially negative except for the left wrist.

Local:—The radial side of the left wrist joint above the wrist line is swollen, mostly on the palmar side, where there is a small localized area of tenderness and fluctuation. There is slight local heat, but no redness. All motions are painful and limited. Diagnosis: Tb. or Chronic osteomyelitis.

August 7, 1921. Tuberculin started. .0001 gm.

August 9, 1921. Tuberculin. .001 gm.

August 11, 1921. Tuberculin. .003 gm.

August 15, 1921. Urine analysis neg. Wassermann and smear neg. W.C.: 5900. Preoperative Diag.: Tb. or Giant-cell Sarcoma.

Operation by Dr. R. Nelson Hatt of the service. Gas ether anesthesia. Iodine prep.

Linear incision over the radial side of the wrist from the styloid. Periosteum incised and elevated medially. As the periosteum was raised, a hyaline tumor mass, non-encapsulated, appeared. Further examination showed an infiltration of the soft tissues overlying the volar aspect of the radius for a distance of 6-8 cm. The flexor tendons of the wrist were intact. The cortex of the volar surface was destroyed leaving a crater 4-5 cm. Specimen obtained. Wound closed with drainage. Good recovery.

August 15, 1921. Path. Report, Dr. J. H. Wright. Microscopic exam.: "Columns and strands of atypical cells tending to form vessels in a cell-rich stroma. There is some necrosis. Diagnosis: Endothelioma—malignant."

August 16, 1921. X-ray report (re-examination of the first films). A purely destructive process. Very little atrophy. No change in the soft tissues. Not compatible with primary or metastatic malignancy.

August 19, 1921. Bacteriological report: No growth from the culture of the tissues taken from the wrist.

August 19, 1921. X-ray of the chest neg.

August 23, 1921. Discharged to the O.P.D. with the diagnosis of Bone Tumor.

October 6, 1921. Wound healed.

September 22, 1921. X-ray of the wrist.

September 1, 1921, to March 20, 1922. Nine x-ray treatments on the tumor.

December 7, 1921. X-ray film of the wrist. Report: No evidence of recurrence. (X-ray print No. 3.)

January 3, 1922. X-ray report: No evidence of regeneration or advance in the process.

January 25, 1922. Letter from Dr. J. C. Bloodgood. "Path. No. 28770. Diag.: Fibro-haem-endothelioma. The morphology of the cells reminds me of the case Path. No. 27039 J. C. B. Selig. Periosteal sarcoma of the spine of the scapula. This case was explored by Martin (N. Y.), in Nov., 1920, and came to me two weeks later. Radium was tried. Ten and one-half months afterward it was apparently cured. Section examined by Ewing, who called it endothelial myeloma, and by Wood, round-cell sarcoma. This case, 28770, has more stroma with the cavities containing endothelial cells. No blood in any of the spaces so perhaps lymph-endothelioma might be better. At any rate, it is a rare tumor. Ewing claims that radium cures this type. One out of six of his cases died of metastasis. I should like to look upon it as a type of Sarcoma."

February 27, 1922. X-ray of the wrist.

June 19, 1922. X-ray taken of the wrist. (X-ray print No. 6.) X-ray report: An advance in the process despite the x-ray therapy.

At this time the husband of the patient came to me for advice. There were no clinical signs other than the wrist to show that her general condition was any worse than it had been during the entire period of observation, and there were no signs of metastasis. The lung films were negative. The local examination revealed an increase in the swelling and the tenderness, and there was slight fluctuation on the dorsum of the radius at the site of the tumor. A palmar splint was worn continuously, which held the hand slightly extended.

Consultation with Dr. Hatt, who had performed the first operation, resulted in the decision to amputate the arm above the elbow. Consent was given and the patient entered the Charlesgate Hospital, Cambridge, Mass., on June 22, 1922. Following a two-day prep., the arm was amputated just above the condyles of the humerus. On the second day the drain was removed and the wound healed quickly. The nerve ends were injected with seventy per cent. alcohol at the operation and there never was any pain in the stump.

Dr. Mallory. Path. Report. No. S22-1349. "Arm with tumor at the wrist. Gross:—Left forearm removed from a woman 30 years of age. The arm is amputated about 6 cm. above the lower end of the humerus. On the dorsum of the wrist, corresponding to the lower end of the radius, is a round swelling about 2 cm. long, and 1 cm. wide. It is firm to the touch. The skin covering it appears normal. On sawing through the radius, the swelling is found to be due to the presence of a firm, reddish mass situated in and beneath the periosteum, which it seems to infiltrate. It is closely adherent to the underlying bone. The lower end of the radius for 3-4 cm. shows rarefaction and transformation into a soft, grayish tissue which is fairly sharply defined from the surrounding fat marrow. On the side opposite the mass, the bony surface is irregular. No abnormality is found elsewhere in the arm.

Microscopic:—Shows a rapidly growing tumor which started in the marrow of the bone and is extending along it. The growth has invaded the involved and surrounding bone tissue destroying much of it and leading to its disappearance in many places. In addition, the tumor has grown through the shaft and invaded the surrounding soft parts; namely, fibrous and fat tissues and in one place, muscle. The tumor is composed of fairly large spindle-shaped cells which in many places are arranged in narrow anastomosing columns suggestive of blood vessels. In places distinct lumina are present. Occasionally one of the lining cells is found in mitosis. Where the cells grow without lumen formation they are presenting an alveolar arrangement like cancer with active stroma around them but showing nowhere any distinct whorl formation: in still other places, they infiltrate the stroma more or less diffusely. In the older parts of the tumor they die out and leave only the stroma behind. The tumor is growing rapidly only at the periphery where mitotic figures are fairly numerous. Centrally, it is largely necrotic or only contracted stroma is left behind as dense scar tissue. At one point outside the bone where the growth is invading the soft tissue it is extending in the adventitia around a number of small arteries."

Massage and active and passive motion were begun early with the application of the artificial forearm in September, 1922. This has been worn constantly without difficulty since that time, and there never has been any abrasion of the stump or any pain or tenderness. The patient one year after the operation appeared in the best of health, and showed no signs of any metastasis of the tumor. During that time she has gained thirty pounds in weight.

SUMMARY

This is a rather complete history of a dangerous tumor in a young woman which has been so treated as to produce what appears to be a cure. It is interesting to note that the original diagnosis of Dr. Wright was correct in that it was a malignant tumor, and that the x-ray reports did not agree. X-ray therapy did not help in reducing the size of the growth but it may have held it back. I believe that the amputation should have come earlier in the history. Surely, above the elbow is the correct line for the amputation, and that operation is to be advised rather than any corrective measures applied to the radius itself.

[NOTE.—I am indebted to Dr. Hatt for his assistance in the treatment of the patient; to Dr. Mallory for his pathological report, and to Miss Leavitt for the photographs; and to the Massachusetts General Hospital for the x-ray prints and the use of their part of the history.]

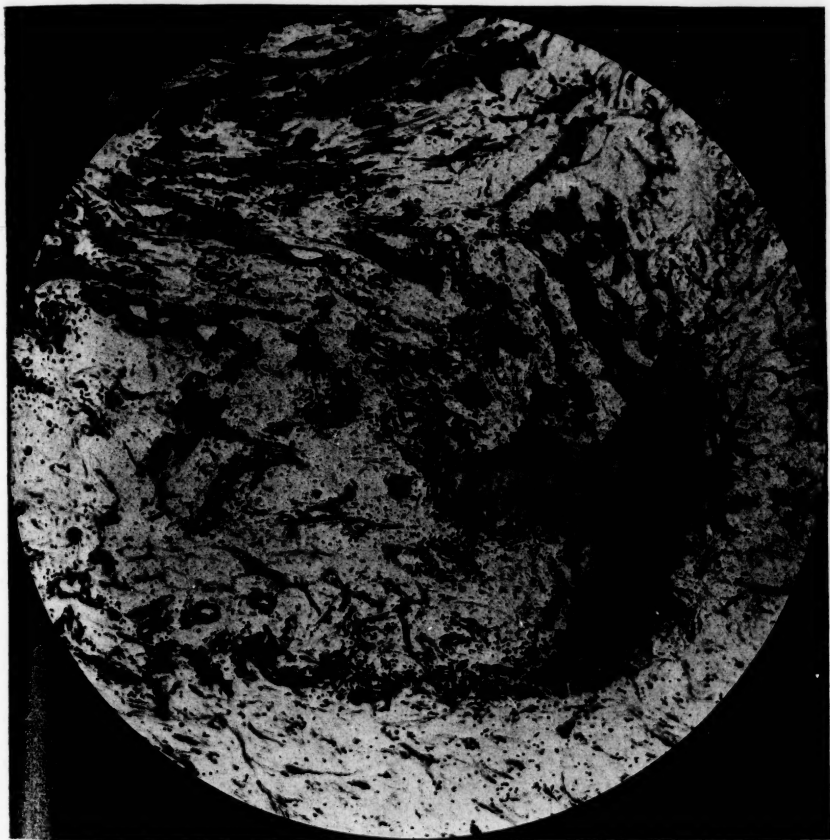


FIG. 1.—The tumor is growing partly as distinct blood vessels and partly as anastomosing columns of spongioblasts. $\times 100$.



FIG. 2.—Two of the tumor blood vessels, showing in the wall of one of them a mitotic figure. $\times 1000$.

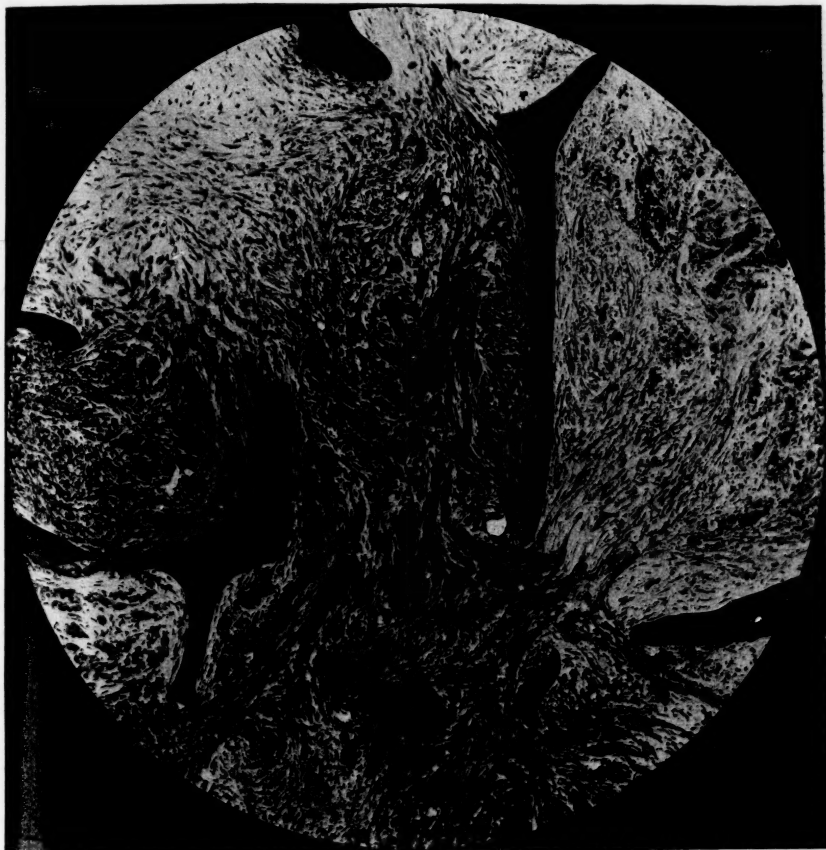


FIG. 3.—Tumor growth between trabeculae of bone; it appears as anastomosing columns of spongioblasts. In places the tumor has disappeared and only the stroma is left. $\times 100$.



FIG. 4.—The tumor here is growing in alveolar masses suggesting the structure of a carcinoma. $\times 100$.



ROENTGEN RAY TREATMENT OF
ECZEMA

BY WILLIAM J. MACDONALD, M.D., BOSTON

Dermatologist Carney Hospital

THIS method of treatment of eczema has received such attention from medical men throughout the world that one would expect the knowledge to be universally possessed by our profession. Nevertheless from our observation and from the cases we see, it is quite evident that a good purpose can be served by directing attention to it again.

Anyone conversant with a dermatological department in any large hospital knows that eczema is one of the commonest affections encountered therein. Diagnosis is, as a rule, easy. Treatment is not always successful. How often do we see cases of eczema appearing with laudable pertinacity week after week and showing little progress? We wish to draw attention to a method of treatment which is revolutionary when compared to the older methods. Such treatment consists in the utilization of the roentgen rays. Will the x-ray cure all cases of chronic eczema? We say, yes, it will, with a few exceptions. Can it be used in acute eczema? Yes; but as a rule, acute eczema will respond to suitable local medication.

It is unnecessary here to mention the causes of eczema or its pathology. We are not at all determined upon the former and the latter varies according to the stage of the disease.

Treatment of eczema differs more or less according to the locality affected.

Scalp.—Acute eczema of the scalp will almost always respond rapidly to local measures, e.g.:

CASE 1. J. W., female, age 33. Following the use of a hair dye, a very itchy exudative eruption affected the whole scalp. The condition rapidly cleared up under the following lotion: glycerinum plumbi subacet. 1 oz., liq. carbonis detergens $\frac{1}{2}$ oz., aq. distil 8 oz.

In this patient x-ray treatment was unnecessary. If we had used it, we would most certainly have got relief, and had we applied it, we would have given subfractional doses to five points on the scalp (Kienbock-Adamson technique).

Chronic Eczema of the Scalp.—Treatment here is first directed towards removing the crusts, be they of the purulent or dry type. A 2 per cent. naphtholated olive oil will achieve this result. The head must be kept soaked and a bathing cap worn. Having removed the crusts and secured a moderately clear scalp, treatment now consists in exposing to the x-ray those areas affected by the disease. The dermatologist is aware of the danger of epilation and he regulates his dose to avoid this.

Face.—When we come to treat eczema of the

face we realize the value of the roentgen ray. It is rapid and cleanly. Patients want a quick result at any time but especially is this so when the face is affected.

Acute Eczema.—Here it is recommended to use, if possible, sub-fractional x-ray doses conjointly with the application of a mild anti-pruritic wash, e.g.: ac. carbol 2 per cent., lotio calaminae 8 oz. It is remarkable how quickly the eruption will clear up.

CASE 2. E. G., female, age 14, private patient. Acute vesiculo-pustular eczema of the face and arms. Referred by Dr. McDonald of Malden. This patient was seen on April 17, 1923. A wash was given. Relief was not particularly fast, so upon the 28th of April every part affected was given a fractional x-ray dose. The patient was perfectly well in a week. No recurrence.

Chronic Eczema of the Face.—No matter what we do for this type of the disease and no matter how rapidly or slowly we cure it, it has a tendency sometimes to recur. Patients have come to our office after a lengthy course of more or less malodorous, if excellent, local remedies. Three or four fractional x-ray doses have cleared the eruption rapidly.

CASE 3. P. C., male. Private patient, age 30. Diagnosis, chronic eczema of the face. Duration, 12 years. The eruption was pinkish red, dry, scaly, infiltrated, moderately elevated and present on both cheeks. The eruption disappeared under four fractional doses. It reappeared five months later and cleared up on two doses.

Acute Eczema of the Hands and Arms.—Recovery is generally a matter of two or three weeks or more. Crude coal tar, ichthyol or carbolized calamine lotion will eventually clear up the condition. The x-ray is unnecessary although helpful. We incline in these cases to treat the parts affected with the Alpine sun lamp followed by a suitable lotion.

Chronic Eczema of the Hands and Arms.—Every practitioner knows of the children who come to him with an itchy rash in the flexure of the elbow or on the arms or wrists. He can recall cases of dry, fissured, painful eczema of the palms in the adult. He can mention cases of intensely itchy, vesicular interdigital and palmar eczema. He will also speak of the slowness and difficulty in treating such cases.

CASE 4. M. L., female. Private patient. Referred by Dr. W. Kels. Diagnosis, chronic eczema of hand (dorsum). Duration, seven years. The eruption, located in the dorsum of the hand, was a dry, itchy, scaly, infiltrated, moderately elevated and isolated plaque which had resisted all local applications and which was a source of great annoyance to the patient. The condition cleared up rapidly in six weeks with x-ray treatment.

CASE 5. C. V., male, aged 39. Private patient. Referred by Dr. J. Shortell. Diagnosis, trade dermatitis (chronic fissured eczema). The man had the eruption for over a year. It incapacitated him from work. It was extremely painful and rendered him

dependent upon others for the slightest behest. The palms and fingers of both hands were affected with a deeply fissured, hyperkeratotic and painful eruption. It had responded satisfactorily to no form of treatment until x-ray therapy was instituted. The man was back at his work in two and a half months and is still there.

CASE 6. W. D., male, age 36. Private patient. Referred by Dr. M. Spellman. Diagnosis, chronic eczema. The eruption was present on the palms and between and on the fingers. It was characterized by mild pruritus, dryness, fissures, scales, and moderate infiltration. Duration, four years. This patient had received treatment which helped but never banished the disease. X-ray therapy cleared it up rapidly and efficiently. Six fractional doses were given. There has been no recurrence in 18 months.

CASE 7. A. O., male, age 36. Private patient. Referred by Dr. J. Shortell. Diagnosis, chronic eczema (trade dermatosis). Duration, eight months. The eruption was caused by cement. It was a chronic, excoriated, infiltrated, slightly elevated, and slightly itchy eruption on the hands and wrists, fingers, palmar and dorsal surfaces. A variety of drugs was used with little success. Five x-ray doses at weekly intervals cleared the skin and allowed the patient to return to work. There has been no recurrence.

CASE 8. J. F., female, age 62. Private patient. Referred by Dr. E. Timmins. Squamous eczema of the hands. Duration, four years. For a period of four years this lady had been diligently rubbing in ointment into a dry, itchy, scaly, and infiltrated eruption on the palms and fingers. Four x-ray doses at weekly intervals cleared the skin perfectly.

CASE 9. W. A., male, age 28. Private patient. Referred by Dr. J. Shortell. Diagnosis, trade dermatosis (sub-acute eczema). This man had a sub-acute eruption characterized by discrete and itchy vesicles on an erythematous base. Duration, two months. For this period he had received local treatment which was slowly and surely curing his eruption. With three x-ray supplementary doses he was made fit for work again.

CASE 10. J. K., age 12, male. Private patient. Referred by Dr. J. T. Bottomley. Here is a type of case that occurs frequently. It borders on a seborrheic eczema, but its degree of pruritus leads us to designate it chronic eczema, liable to become acute at any time. The location is the elbow flexure. The rash was very itchy and of a papulo-vesicular nature with excoriations and a dull, erythematous base. Ointments and the Alpine lamp helped the eruption slightly, but four x-ray doses cleared it up completely.

CASE 11. J. W. B., age 47, male. Private patient. Referred by Dr. J. P. Tynan. This man had an eruption on his hands and fingers (dorsally). It was a sub-acute vesicular eczema, moderately itchy but most annoying to the patient. Ointments had proved useless. Three fractional x-ray doses cleared the disease up completely. No recurrence.

Eczema of the Lower Limbs—Acute.—The treatment of acute eczema in this locality differs in no way, generally speaking, from that on the arms. Lotions generally bring about a rapid cure.

Chronic.—There is a dermatological condition called chronic circumscribed neurodermatitis. It resembles chronic papular eczema, a type of which indeed it is. This complaint is fairly

common especially in middle-aged ladies. Ointments and lotions are practically useless. One has only to question these sufferers to learn how much money they have expended in drug stores. The disease favors the nuchal and sacral regions and the upper thighs posteriorly and on the inner surfaces. It is a dry, lichenified eruption, extremely itchy and usually confluent.

CASE 12. E. T. M., 51, female, single. Private patient. Referred by Dr. B. A. Godvin. Diagnosis, neurodermite. Duration, two years. The eruption was situated over the gluteal region and was characterized by intense pruritus and fairly well marked, infiltrated, confluent papules. It presented excoriations and bleeding points. For two years it had resisted all treatment. X-ray cleared the whole condition in two months. No recurrence.

CASE 13. A. H., age 34, female, single. Private patient. Referred by Dr. W. J. Donovan. Diagnosis, neurodermite. Duration, 10 years. Location, sacrum and inner and upper third of both thighs. The rash resembled that in Case No. 12. No local application had helped at all. She came for x-ray treatment with profound skepticism. Seven fractional doses at weekly intervals completely banished the eruption.

There is an extremely chronic type of squamous eczema generally met with in aged people and associated with varicose veins. This complaint is responsible for the utilization and waste of gallons of oil of cade and similar drugs. At times and with perseverance, splendid results are obtained. But we have no hesitation in saying that a speedier, surer and more cleanly weapon is the x-ray. Futile it would be to even apply the x-ray, in these cases, unless attention is directed to the varicose condition present.

Eczema of the Body.—Of all the varieties of eczema, that on the body is the most aggravating and pestilential not only for the patient but for his physician.

Acute.—It is essential to keep these patients recumbent, lightly clad, lightly fed, and secure sleep for them. Locally, we prefer the Alpine lamp to relieve the itching and antipruritic lotions frequently applied. Unless they can be sent to a hospital it is not easy to use the x-ray. Nevertheless if they can walk to the dermatologist's consulting rooms the x-ray and the Alpine lamp combined will bring about a more rapid cure than would otherwise be the case.

CASE 14. S. L., age 45, female, married. Private patient. Referred by Dr. J. E. McGrath (Hudson). This patient had an eruption on her body, thighs and back for eight months. It was intensely itchy, reddish, confluent in places, discrete elsewhere; on the lower abdomen were large, reddish, oozing plaques showing excoriations. She had tried a variety of ointments and washes with no success. Cultures and scales were negative for any dermatomycotic condition. Treatment consisted in generalized Alpine lamp exposures, spaced out roentgen ray treatments and a carbolized lotion between times. After two months she left with no trace of her eruption present except for some slight pigmentation of the skin. There has not been time for a recurrence,

although it is to be expected, in view of her poor state of health.

Chronic.—Chronic eczema of body confronts us as a universal widespread eruption or as a more or less discoid rash. Treatment is tedious no matter what one does. The discoid cases will respond rapidly to the x-ray. The generalized erythrodermia will require time and a lot of patience. For this type the x-ray is, we consider, the treatment of election. There is very little in medical literature to back this up, but we have had success with the x-ray and cite the following cases:

CASE 15. J. F., age 67, male. Private patient. Diagnosis, dermatitis exfoliativa. This man appeared with a rash which covered him from top to toe. It was intensely itchy, weeping, red, and excoriated. The primary lesions were vesicles, many of which had become pustular and presented crusts. In the flexures the excoriations were bleeding. On his back were sodden scabs. His general health was poor. Blood count negative leukemia cutis. Treatment consisted in internal medication with thyroid substance and externally the x-rays. Owing to the whole body being involved it took a considerable time to achieve results. He started treatment in May, 1922, and returned to his work in December, 1922. At the present time he is perfectly well and strong and has no skin eruption. He is still taking thyroid. How much the thyroid contributed towards the cure cannot be ascertained.

CASE 16. V. C., age 19, female, single. Private patient. Diagnosis, chronic papular eczema of the body. Duration, three years. The eruption in this case was generalized. It was a dry, papular, itchy, infiltrated rash, particularly bad upon the neck, face and back. The whole body was excoriated. This patient showing undoubted signs of hypothyroidism, received thyroid substance. Her skin was treated with x-rays. In this case again the extent of the eruption precluded a quick result, but eventually the whole eruption disappeared. At the time of writing she is quite well.

Eczema of the Nipple.—If the eruption is acute a mild lotion containing lead and tar will be sufficient. If the eruption is of long duration, infiltrated, elevated and scaly x-ray therapy is indicated. It usually, but not always, succeeds.

CASE 17. M. D., age 51, single, female. Private patient. Diagnosis, eczema of the nipple. Duration, two years. The eruption was situated on the right nipple. It was characterized by redness, pruritus, and moderate infiltration. Paget's disease was excluded. The patient had unsuccessfully tried a variety of treatments. Four x-ray doses completely cleared away the condition.

Eczema Ani.—This type of eczema, if purely local, is amenable to roentgen ray treatment with every prospect of success. If it is a mycotic infection, we prefer silver nitrate applied twice a week. Where there is a possibility, and such should invariably be sought after, of pelvic or abdominal disorders, treatment directed at the offending viscus will be only rational and generally successful.

Infantile Eczema.—Regarding this type of eczema not a great deal can be said here. The cure is apparently a question of diet and hygiene. Crude coal tar would appear to be the best local application we have, but it is pre-eminently the most uncleanly. Mothers object to it most emphatically. Dr. G. McKee of New York advises x-ray for the severe cases. As his advice is golden then let the babies be treated locally with an ointment and their diet be regulated. Some cases seem to resist all external applications, and trial should then be made of the x-ray, using sub-fractional doses.

SUMMARY

1. Acute eczema will clear up on suitable local treatment, diet and rest. But if it is possible to do so, supplement the local treatment with x-ray.
2. X-ray is the best method of treating chronic eczema. We advise it in all cases. Our own and the experience of other dermatologists bear out this contention.
3. Eczema here does not mean epidermophytosis or any of the mycotic diseases.
4. X-ray treatment offers a rapid, clean and tolerably certain cure in most cases.
5. In conjunction with the x-ray, we invariably correct the diet, bearing in mind that carbohydrate excess and eczema are mutually related.
6. Cutaneous roentgenology is best undertaken by the dermatologist. He can interpret the progress of the disease better than the roentgenographer.

THE PRENDERGAST PREVENTORIUM

BY JOHN B. HAWES, 2d, M.D., AND JOSEPH GARLAND, M.D., BOSTON

THE history of the Prendergast Camp of the Boston Tuberculosis Association began in 1909 when the Association received a gift of twenty acres of land in Mattapan from the late James M. Prendergast. On this land was established a camp to provide an open-air home for men who had been discharged from the state sanatorium at Rutland as "arrested" cases, but who were not yet in condition to take up their ordinary mode of living. The camp was opened on August 6 of that year with beds for ten men, the idea being that the camp should be self-sustaining through the payment of small sums by the patients accommodated. During the summers the camp was used for a considerable number of children who came and went daily.

Later, as very few arrested cases were sent, the camp was used for men on the waiting

lists of the state sanatoria for whom temporary accommodations of some kind were necessary. This function also in time became unnecessary as the sanatoria increased in number to the point where there were no long delays in admission. The children also were given up because the outdoor summer camp on Parker Hill,

Out-Patient Department of the Boston Sanatorium, and many parents, were invited. The preventorium idea was featured in the Christmas Seal Sale of 1921. As a result of this successful sale, necessary alterations in the buildings were made to fit them for preventorium uses, and the project was definitely launched.



run originally by the Association, was moved to Franklin Park and kept open summer and winter. This camp, which had become the outdoor school, was later taken over by the city.

Early in 1921, consequently, with a small

Important improvements in the camp equipment consisted in changing the long cubicle building into a single open dormitory and installing an up-to-date lavatory. Water has been and is furnished by a well, although we hope that city water will soon be installed.



number of men still in residence at the camp, the possibility of turning it into a preventorium for children was considered. This plan took more tangible form with a party on August 18 to which about fifty children, selected by the

On May 10, 1922, the Preventorium was opened for twenty girls, from five to twelve years of age, selected by the Out-Patient Departments of the Boston Sanatorium and the Massachusetts General Hospital, and the Bos-

ton Dispensary. The camp committee formulated certain requirements to be fulfilled before a child could be considered as a proper candidate for the Preventorium. She cannot be admitted with active tuberculosis, but on the other hand should show evidence of tuberculous infection by giving a history of familial exposure to the disease, by the presence of enlarged bronchial glands, demonstrable by x-ray, and by a positive Von Pirquet test. This type of child may properly be considered as headed towards active tuberculosis and a potential future consumptive. It is with this class of children that successful preventive measures are most effective.

The camp with its single dormitory is at present capable of caring for only one sex, so up to date no boys have been admitted. We feel that these children should be allowed to remain

a voting booth was loaned by the city. This spring an open-air school was constructed adjoining one end of the dormitory. A playground teacher has been recently assigned to the camp by the School Department for the summer months, and books are being loaned by the Public Library. Many churches, clubs and other agencies, as well as private individuals, have made donations of money, clothing, books and toys, while a very substantial contribution of sewing has been made by the women's sections of the churches and by the Women's City Club. In addition to this interest shown in the camp, entertainments and moving picture shows have been given.

The erection of the school house has made possible a temporary increase in the numbers at the camp for the summer to thirty-two patients by providing space for twelve extra cots.



at camp for six months or a year in order to give them an opportunity to derive the maximum benefit from it, and with the majority of the girls who have been cared for, now over fifty, this ideal requirement has been fulfilled.

Proper follow-up work on our discharged patients from year to year we regard as of almost as much importance as the patients' stay at the Preventorium. This work is being accomplished with the coöperation of the Boston Sanatorium and constitutes one of the main duties of the Boston Tuberculosis Association's recently acquired social worker.

The camp personnel consists of a nurse in charge and her assistant and a cook and cook's helper. Further additions to this staff are needed. A school teacher was provided by the Boston School Department in the fall of 1922, and

The preventorium idea is not a new one. It has been successfully employed before this in other cities, first at Farmington, later at Toronto, Canada, Providence, Detroit, Chicago and elsewhere, but this is the first attempt of the kind in our community, although the way was undoubtedly broken by the outdoor school conducted by the Boston Tuberculosis Association in 1908 and 1909. This outdoor school increased in numbers from twenty to over one hundred, and was continued by the city for about two years.

The schedule at the camp calls for almost twenty-four hours a day of life in the open air. The dormitory is of the lean-to type, entirely open in front but provided with canvas screens for stormy weather. We hope to have windows put in before winter. The school room

is entirely open on three sides and similarly equipped. An ample but simple diet is provided; rest and exercise hours are prescribed, and the hours spent in school are the minimum that will enable the children to keep up with their work. In the summer there is ample opportunity for gardening and nature study and we are planning to have lessons in sewing and housekeeping and other activities which will enable us to discharge the children from camp not only in better physical condition, but better potential citizens than they might otherwise have been. These objects, if they are to be gained, will call for a more liberal program than the camp, during its infancy, has been able to adopt. An increase in personnel will be necessary, and early in this development will come an extensive building program as soon as the available funds justify it.

The kitchen must be better equipped in order that an increase in numbers may be cared for; city water should be piped to the camp, and more plumbing installed. An infirmary with isolation quarters is a very real need; quarters for the increase in staff must be provided, and with these improvements should go an adequate examining room and a simple laboratory. There is some question as to whether it would not be advisable eventually to have an admission ward where new patients could be isolated for the period of incubation of the common contagious diseases before being allowed to mingle freely with the others. Many of these improvements must precede or accompany the development that will bring with it a wing for boys—the next real step in extending the scope of the camp.

The Preventorium has admittedly been conducted during its first year as an experiment. The experiment has succeeded and its further continuance and growth has been justified and more—it has become a public duty. The more immediate expansion of the camp has been outlined. Those with breadth of vision and strength of purpose can look still farther forward and see the possibilities which may eventually be realized from this humble beginning as increased interest and support from the community is acquired.

We are accustomed to supporting our sanatoria for the care of consumptives in all stages of the disease. We are not entirely awake to the fact, however, that these cases of consumption are preventable; that the seeds are most often sown in childhood and that then is the time to stamp them out and prevent their development. The public health aspect and the prevention of disease are more important than its treatment, for what cannot be cured can often be prevented. We may hope that the time is not far distant when the preventorium will be a regular part of every community's sanatorium program.

Book Reviews

A Primer for Diabetic Patients. WILDER, FOLEY, AND ELLITHORPE. Phila.: W. B. Saunders Co. ed. 2, 1923, 12 mo., pp. 119, \$1.50 cloth.

Rewritten to date, this little book stands out above the crowd of similar recent works by consulting dietitians and others, particularly for anyone desiring "something more like a primer" than Joslin's Manual. The frontispiece is a plate of Benedict's test, without sugar, with traces and with 2 per cent. The advice to inject insulin in a *single* dose a day (p. 38) is at variance with the preference for two doses a day indicated in most reports that the reviewer has seen. The suggestion to balance insulin by adding white bread (p. 39) is not appealing, when one considers that diabetics mild enough to be permitted a little bread, have in the past generally remained free from glycosuria as long as they renounced the bread, while "stopping over" frequently when they insisted on it; even with insulin this group of patients if allowed the latitude of a little bread, seem apt to exceed their allowance. In other words it is a grave question whether a diabetic should be exposed to the risks and expense of insulin merely for the sake of securing bread.

All schools differ, however, and as a whole this Primer is excellent.

A Clinical Guide to Bedside Examination. By DR. H. ELIAS, Docent and Assistant at the First Medical Clinic of the University of Vienna, Austria; DR. N. JAGIC, Extraordinary Professor and Chief Physician to the So-fienspital, Vienna, Austria; and DR. A. LUGER, Docent and Assistant at the Second Medical Clinic of the University of Vienna, Austria. Translated by W. A. BRAMS, M.D., Adjunct in Medicine, Michael Reese Hospital, Chicago. Cloth, 135 pages. Price \$1.50.

This little volume is designed to furnish the physician and student with a guide for the physical examination of the patient at the bedside; only the findings on inspection, palpation, percussion and auscultation are included.

While the authors may be said to have listed most of the things to be looked for, the reviewer is of the opinion that the value of the text is often lessened by the lack of sufficient details. Many good points are mentioned in the book, but it is doubtful if the average reader will add much to his knowledge, as the manner of presentation is such that the material contained doesn't stick. One gets a sensation somewhat akin to that produced by reading pages of a dictionary. The reviewer grants that the authors have undertaken only a brief outline of the methods of examination at the bedside, but

he holds that the student will profit more by the reading of one of the various books on physical diagnosis. Perhaps some day Elias, Jagie, and Luger will present a book which is an expansion of this little guide, it should be worthy of attention.

The Normal Child, Its Care and Feeding. By ALAN BROWN, M.B., Physician in Chief to The Hospital for Sick Children, Toronto; Associate Professor of Medicine in charge of Pediatrics, University of Toronto, etc. New York and London: The Century Company. 1923.

The year 1923 has been a banner one for the publication of books on the care and feeding of normal infants. A few have been excellent; none have been poor; all have been useful. Of necessity there has been a great deal of duplication among them.

This book from Toronto has been representative of its type. Some excellent facts on milk are given, relating to its production and sterilization by pasteurization or boiling, which are sometimes omitted but which need constant restoration, for they constitute one of the most important subjects of Pediatrics. Many stock formulae and numbered formulae are printed, which may be variously regarded. Most physicians prefer to feed infants entirely individually; nevertheless it must be admitted that such formulae are probably safer for a mother to employ than those given on proprietary food labels.

The chapters on Sleep, Rest, Exercise and Play; Discipline and Education; and Habits are valuable and in line with the more modern ideas of mental hygiene for children.

A Synopsis of Medicine. By HENRY LETHERBY TROY, M.A., M.D., B.Ch. (Oxon.), F.R.C.P. New York: William Wood and Co., 1923. Third edition. Pp. 955. Price \$6.00.

The aim of this book, as outlined in the preface to the first edition (1920), is to provide "a synopsis of such principles of medicine as are of importance at the present time." The book attempts to present in summarized form the important points in etiology, pathology, physiology, diagnosis, prognosis, and treatment in various disease conditions. Realizing the obvious impossibility of attempting an exhaustive discussion of any given disease, the author clearly states that the book can in no way "replace a text-book."

The general arrangement of diseases is similar to that employed in the "Principles and Practice of Medicine" by Osler and McRae. Summaries are, in general, well arranged, although there is a slight tendency to treat symptoms and disease entities as of equal importance.

Therapy, for the most part, is well handled, although much of the treatment is entirely empirical, and occasionally of questionable value. In several instances the important advances in treatment have not been mentioned. Thus, in diabetes mellitus insulin therapy is barely alluded to. The treatment of diabetes insipidus by nasal sprays of pituitrin is not given. Among other omissions are to be noted vaccine therapy of yellow fever, sunlight and Alpine lamp in rickets, and the Sippy treatment of peptic ulcer. The treatment of heart failure and cardiac arrhythmias is well outlined.

The discussion of normal and abnormal physiology is variable in quality, and is rather unsatisfactory. Cardiac arrhythmias, the circus movement, etc., are well done, but the physiology of the blood and digestive systems is incomplete and poorly discussed.

The present volume contains several additions to previous editions, and several sections have been rewritten. As a handy reference book the "Synopsis" undoubtedly fulfills its purpose. One cannot escape the conviction, however, that the author has enlarged the scope of his work beyond that justified by the title, and without the addition of any valuable medical knowledge.

Alcohol and Prohibition in Their Relation to Civilization and the Art of Living. By VICTOR G. VECKI, M.D., Pp. 165. Price \$2.00. J. B. Lippincott Company.

Dr. Vecki's book on "Prohibition" is an obviously prejudiced presentation of the problem which confronts this country. The author is opposed to Prohibition as it now stands, but his arguments against it are neither original nor well presented. His book consists largely of extracts from newspapers dealing with various evils of Prohibition. Just how much credence is to be given to these efforts of modern journalism is a question, but Vecki puts them forward as evidence of value.

Many of us agree with him in his conclusions, namely, that Prohibition as it exists at present is doing more harm than good. His book, however, makes no real effort to present the case for Prohibition, but gives us a one-sided, superficial and apparently hastily-flung-together mass of unsubstantiated observations.

International Clinics. Philadelphia, Series 33, vol. 3, 1923.

Despite the quality of the editors and of some of the authors, this volume has not proved stimulating to the reviewer. There is too much material resembling a text-book summary. Exception may be made for Groover, Christie and Merritt on the x-ray, Freeman on intestinal infantilism, and Cattell on hanging.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY

RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.

F. M. PAINTER, ASSISTANT EDITOR

CASE 9491

A MARRIED American washwoman of forty-two entered October 11, complaining of weakness for the past six months and recent profound prostration. She was very uncommunicative and uncoöperative. The history was obtained from Mrs. A., who had employed her for many months to do days' washing.

P. H. Not recorded.

P. I. In March the patient had a miscarriage. She did not realize that she was pregnant, and worked up to the day of the miscarriage, which she said was spontaneous. After the miscarriage she did not consult a physician, but continued to work as usual. She began to tire easily and to lose her appetite. In two months she became weaker. A physician prescribed a liquid to improve her appetite. During the past six weeks she had failed markedly and her skin had become yellowish. September 25 she went to do washing for Mrs. A., who sent her home and had her go to bed. She had become more and more prostrated, had almost no appetite, and had had considerable fever with night sweats. Her sputum was pronounced by a physician negative for tuberculosis. She had steadily lost ground, and had remained in bed all the time. There was no history of pain, palpitation, dyspnea or hemoptysis. For the past few days she had had mild cough with a little sputum. Nothing was known as to her stools or genito-urinary condition.

P. E. An obese, flabby woman with an anxious expression and hyperpnea. Skin hot, moist and jaundiced. Conjunctivæ yellow. Teeth in very bad condition. Marked pyorrhea. Throat very difficult to see. A reddened ulcerated area with greenish membrane in the left tonsillar area. *Lung* signs as shown in the diagram. *Heart*. Apex impulse not found. Action rapid, regular. Sounds weak. First sound reduplicated at the apex. A soft systolic murmur, loudest at the apex. Pulse rapid

and thready. *Abdomen* rounded, soft, tympanitic, somewhat tender over the splenic area.



Pelvic examination. Excoriation of skin of thighs about the vulva. Profuse yellow-green purulent discharge. Cervix soft, irregular, lacerated. Tenderness in both vaults, more on the left. Fundus not felt. Examination very unsatisfactory because of resistance of the patient.

T. 103.2°-105.5°. P. 120-149. R. 31-48. Amount of urine not recorded. Sp. gr. 1.018. Findings negative except for 8-10 leucocytes per high power field. *Blood*. Hgb. 30 per cent. Leucocytes 10,800. Polynuclears 91 per cent. Reds 2,560,000; marked achromia, no marked variation in size or shape, a few normoblasts, many polychromatophilic cells, platelets reduced. *Blood culture* negative. *Wassermann* negative. *Widal* negative in 1/50 solution in one hour. *Vaginal smear*. Bacteria very numerous; no predominating form. Pus cells very numerous. *Surgical consultation* October 12. "The patient is *in extremis*, rendering any pelvic examination unsatisfactory. A mass the size of a grapefruit is palpable bimanually, and would seem to be in the position of the uterus. It is pushed to the right, and there is some suggestion of a pelvic abscess on the left, forcing the uterus over. The cervix is drawn upward, and there is a certain amount of induration around the vaginal walls, especially in the left vault."

Orders. October 11. Force fluids. Individual precautions. Soft solid diet. Nourishing liquids. Veronal gr. x. Morphia gr. 1/6 s.c., repeat once if necessary for restlessness. Later order, repeat morphia every three hours for sleep.

The patient developed increasing dyspnea and weakness, and October 12 died.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE HISTORY

If we take all the patients who come to the hospital complaining of weakness, or whose presenting symptom is weakness and nothing else, two-thirds of them turn out to be pernicious anemia. Of course many complain of weakness plus pain somewhere; then they run into neoplasms. But when they complain of weakness

and not much else, pernicious anemia is the thing. Then of course the infections like typhoid or tuberculosis; but then generally there would be weakness plus cough or some other one thing. Here there is weakness plus cough with fever, night sweats, and a yellowish color. Pernicious anemia will give all those. Pernicious anemias often have fever. This patient is a little young for pernicious anemia, and one cannot even guess more than to put those alternatives before one's mind, the chief two being pernicious anemia on the one hand and some infection on the other.

A PHYSICIAN: Is forty-two young for pernicious anemia?

DR. CABOT: It is early, the average age being about forty-nine.

NOTES ON THE PHYSICAL EXAMINATION

Hyperpnea is not a symptom we often see in pernicious anemia. Obesity is not so very rare, though not common.

In the lungs there is apparently no change in breathing or in percussion.

There is nothing distinctive in the heart examination.

Of course she has had a miscarriage. She may have a septic uterus and general septicemia with anemia secondary. But there is very little given us here that would go to prove or disprove that,—nothing as to tenderness in the uterus itself and nothing as to enlargement. We do not know yet about fever.

The urine examination has no importance, as we do not know that it was a catheter specimen.

The blood is that of a perfectly typical secondary anemia except for the reduced platelets. In most secondary anemias they are increased. But she has so few leucocytes that this is not significant.

There is a good deal in the second pelvic examination that we did not get before.

DIFFERENTIAL DIAGNOSIS

Pernicious anemia, which I first considered, is perfectly easily ruled out by the character of the blood, the rapidity of the death, and the lack of any intermittency of symptoms. The condition is obviously an infection, and with so much in the pelvis we have no good reason that I see to look elsewhere for the source of the infection, especially as she has had trouble there, though it is a good while since her miscarriage,—seven months. She has had presumably a chronic fever, a fever of more than two weeks. Our records here show that fevers of more than two weeks' duration are generally tuberculosis, sepsis, or typhoid. This is not typhoid. That is pretty thoroughly ruled out by the physical examination including the blood. We have no

good evidence that it is tuberculosis. The most important piece of evidence is that she has died. People do not die of tuberculosis with this rapidity unless it is tuberculous meningitis, not suggested here. So it comes back to sepsis, and the facts seem to back that up. Pelvic abscess I believe is the starting-point of her anemia and of her death.

What about the condition of the lungs? As the examination of the lungs was made the day before death it is not particularly significant anyway. She has a few scattered râles, as most patients perhaps would have so near death, from general circulatory weakness. I see nothing to justify us in saying local pulmonary disease. She has had a cough. She may have bronchopneumonia or tuberculosis, but the signs do not bear it out. Bronchopneumonia would be more chronic, and would not go along with an obese patient. So I should think we could throw out the lungs as the source of this sepsis.

Can it be in the heart? Can she have a malignant endocarditis? Perfectly, but we do not need to suppose it. There is no evidence of emboli, and no such murmurs or thrills as we usually get with malignant endocarditis. I should think we had better not assume it.

What about the tender mass in the region of the spleen? It can perfectly well be the spleen, increased in size as a result of sepsis, stretching its capsule and thereby producing tenderness. I should think that was the most natural assumption.

This is very acute, even for sepsis; but sepsis is sometimes as acute as this.

DR. YOUNG: What about the jaundice?

DR. CABOT: I meant to have said that so far as I see that could be most easily explained as the result of sepsis too. We have nothing to call our attention to the liver. Of course it may be sepsis and yet liver, that is, abscess of the liver or pyelophlebitis. We have no ascites, however, and no enlargement of the liver. I think it seems most reasonable to explain jaundice, therefore, like puerperal jaundice, as part of the septic process.

A PHYSICIAN: The jaundice could go with the secondary anemia, couldn't it?

DR. CABOT: It could be the result of the same cause. We should not say it went with it. Jaundice goes with pernicious anemia without any known cause back of it, but with secondary anemia we generally say both the jaundice and the anemia are fruit of sepsis.

She has hyperpnea and dyspnea, which are not striking symptoms of sepsis as a rule. They do occur in sepsis, and I do not see anything else that we can call into account for them. There is no evidence of nephritis or of diabetes. She has not been starved so far as we know.

I have made no reference to the grayish mem-

brane on the tonsil. Apparently there is no culture from it, and there is nothing further in the record.

DR. PAUL H. MEANS: We tried to get a culture, but she struggled too hard.

DR. CABOT: We do not know, then, whether there was any diphtheria there. K.L. would not have accounted for her anemia. It seems to me much more natural to think of this as one more feature of the general sepsis. It is rather strange that she has had no chills, according to my hypothesis of sepsis. She has had night-sweats, which are not so far away from chills.

It is strange that she has not complained of pelvic pain. "There was absolutely no history of pain," the record says.

DR. YOUNG: I think we very often see that in a pelvic abscess such as this. I have seen it several times.

DR. CABOT: Certainly the majority of pelvic abscesses would have pain, but every now and then not. With a puerperal uterus I have often seen no pain, but it is rather late to call this a puerperal uterus,—seven months.

That is the best I can do. I think a focus or foci of sepsis will be found in the pelvis. It may have extended up to the liver, but I think on the whole not. It may have involved the heart with malignant endocarditis, but I think on the whole not. I do not see why anything else except the large spleen that would go with sepsis should be found.

DR. MEANS: We saw this case. She was not here very long, and we have no further data ante-mortem than the record gives. Our diagnosis was essentially the same as yours,—sepsis, probably from a pelvic focus.

A PHYSICIAN: Would there be any grounds for considering malignancy?

DR. CABOT: I do not see it, because the course has been so rapid, there is no emaciation, no pain, the fever is so high, and the blood count is not like it. I should say not.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Septicemia.
Pelvic inflammation.
Possibly bacterial endocarditis.

DR. RICHARD C. CABOT'S DIAGNOSIS

Sepsis with a focus or foci in the pelvis.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Hemangio-endothelioma of the spleen, liver, lungs, pleura, uterus, marrow of vertebra and of tracheal, bronchial, and retroperitoneal lymph glands.

2. Secondary or terminal lesions

Icterus.
Wet brain.

3. Historical landmarks

Slight chronic pleuritis.

DR. RICHARDSON: The examination of the head showed a very wet pia, and there was a little fluid at the base. The brain tissue was wet.

The skin was sallow, with a faint yellowish tinge. The skin of the upper arms and the backs of the hands was freckled and a little brownish.

The retroperitoneal glands were rather generally enlarged, up to three cm. across. This condition was well marked in the lesser omentum and down along the aorta, with a few enlarged glands out along the iliacs.

The bronchial glands were markedly enlarged, some up to five cm. At the bifurcation of the trachea there was a large mass of glands, and continuous with this a mass that extended up on each side; these fused into an ovoid mass which rested over the lower third of the trachea. The posterior surface was concave, the anterior surface convex. It measured twelve cm. by four by five. The mass at the bifurcation was about half that size. The lung tissue generally was spongy, pale, and rather dry. In a few places the visceral pleura showed small grayish nodules and plaques, and in some places these were seen on the parietal pleura.

The heart weighed 330 grams,—a large heart. The myocardium was of pretty good consistence, pale brown-red. The pericardial fat was in large amount.

The liver was four cm. below the costal border, and weighed 1975 grams. It showed dotted over its surface small pale grayish areas. Cutting into the liver showed these to be the outer surfaces of nodules of new growth tissue which was fairly firm and homogeneous.

The bile-ducts run in the lesser omentum, and it is difficult to tell whether the glands pressed on them enough to cause any of the icterus. Otherwise we have only the new growth tissue in the liver to account for it.

The spleen weighed 710 grams, markedly enlarged, the surfaces fairly smooth, but dotted over with areas similar to those on the liver. The splenic substance was thickly sown with nodules of new growth tissue like those in the liver.

The uterus was slightly enlarged, the mucosa in places irregular, somewhat thickened, and there was a slight opacity in places in the sub-mucosa. In the region of the cervix were a few glands with mucus in them.

The culture from the heart blood was negative.

Anatomically, then, this case was one of malignant growth manifesting itself most strikingly in the liver, spleen and glands.

DR. YOUNG: There was no mass in the pelvis?

DR. RICHARDSON: No. The tubes and ovaries were negative. The uterus itself was a little enlarged, but except for the slight opacity and the little irregularity of the mucosa in the region of the fundus it was negative.

DR. CABOT: There was some malignancy in the uterus, but not presumably primary?

DR. RICHARDSON: No, probably not.

DR. CABOT: It might conceivably be primary in the uterus?

DR. RICHARDSON: Yes.

DR. YOUNG: The temperature we shall have to lay to tumor of the liver.

DR. CABOT: Yes.

I think I shall make the same mistake again. Someone suggested tumor. We considered it, and there was nothing that I could see, and nothing that I can see now, whereby we could possibly make this diagnosis.

A PHYSICIAN: Was the diagnosis put down as sepsis?

DR. CABOT: I suppose so. I cannot imagine how it could be put down as malignant disease. The liver and spleen did not show anything except some enlargement which we could account for in other ways. If there had been an x-ray of the whole body these mediastinal glands would have shown up, but there was apparently nothing else, no dullness up there.

CASE 9492

An Italian schoolboy of thirteen came to the Emergency Ward September 1.

F. H. and P. H. Not obtained.

P. I. Six days before admission he had a "stomach ache." The next morning his abdomen was sore all over and he was believed to have a slight temperature. That night the pain settled in the right lower quadrant. By admission it had become more severe and was steady. He was nauseated but did not vomit. He took no food. The night of August 29 the pain began to subside, and since that time he had had only soreness in the right lower quadrant, more marked on exertion. He had no more fever, and was now taking his food as usual. His bowels had moved freely with salts. He had never had any similar trouble before.

P. E. A well tanned, well nourished boy, not acutely ill. Apex impulse of the heart in the fifth space 7.5 cm. to the left, coinciding with the left border of dullness. No other measurements recorded. A soft systolic murmur at the

apex. Second sounds loud and snappy. First sounds normal. Lungs normal. Abdomen negative except in the right lower quadrant, where in the region of a slight iodine discoloration just inside and above the anterior-superior spine there was moderate tenderness with slight spasm and a round, tender, apparently fixed mass about the size of a small peach, coinciding with the area of tenderness. Examination otherwise negative.

Before the first operation *T.* 99.8°, *P.* 112, *R.* 20, *urine* and *blood* not recorded except leucocytes 14,600.

The afternoon of admission operation was done. Next day there was considerable hemorrhage into the dressing. The wound was examined and the stitches removed without effect. More stitches were removed, gauze was packed into the wound and the edges strapped. The hemorrhage ceased. September 5 the patient was restless but was sleeping fairly well. There was adequate drainage. There had been no more hemorrhage. September 7 a Wassermann was negative. Since September 5 the temperature had ranged from 99° to 101.4°. Since the 3rd the pulse had not been above 110. The boy complained of abdominal pain and slight nausea. The abdomen was soft. There was some rectal tenderness posteriorly. September 8 the wicks were pulled out under gas and Miller wicks inserted. There was a definite open sinus. A small amount of bloody pus was evacuated. The journal notes September 9 that the temperature was normal, but the chart records it as 99.9°-102.4°. That evening he started to vomit. The tract of the wick could be felt. There was no visible peristalsis. The wound was quite dry. Next day he was still vomiting brownish fluid and felt worse. The peristalsis was now visible, and the abdomen was rigid but not very tender. X-ray showed no evidence of pathology in the chest. The diaphragm appeared normal in outline. Fluoroscopic observation of the movements of the diaphragm was advised but is not recorded. September 11 the temperature was normal.

September 12 a second operation was done. He was put on the dangerous list after it and given a subpectoral and taps. There was very little drainage. The abdomen was tight and quite tender on the left. The temperature was 100°-102.3° by rectum. The Mixer tube fell out and there was freer drainage. The wound looked in good condition. From this time he showed constant improvement. His lips however continued to be dry, and he vomited once. September 16 the temperature rose to 103°. He took fluids better.

September 22 he vomited small amounts four times, tossed occasionally with pain, and was semiconscious. The temperature was 98.8°-100°. There was no distention. September 24 a con-

stant suction apparatus was used. There was more distention, and the patient looked much worse. The journal notes a subnormal temperature. (Chart 98.1°-99.5°.) September 25 the patient died.

DISCUSSION

BY DR. EDWARD L. YOUNG, JR.

I think whenever we have the story of a stomach ache which starts in the epigastrium, settling in the right lower quadrant, followed by nausea and fever, we can make a diagnosis of appendicitis without any further history or examination. Certainly the exceptions to that statement would be so few that they could almost be disregarded. If, however, there is any change in the order of those symptoms it is a suspicious case. That is to say, if nausea comes first, definitely, or if by any chance fever is first, then I think we have to be very careful that there is not something else. It is true that we see cases where the symptoms are not always in that order, but when they are not we must be dead sure of the diagnosis before going ahead. Of course the reverse of this statement is not true; it has not got to start in the epigastrium. If it is a retrocecal appendix, then the pain will not be epigastric. So that here I think we are entitled merely on the statement that the boy makes to say that he has acute appendicitis.

The physical examination bears out our belief in the diagnosis, and the mass is either caked omentum or perhaps gut around an inflamed appendix, or it is perhaps an appendix abscess in the omentum or gut or both.

The only thing to do, as this case presents, is to get rid of the appendix and if necessary drain the abscess, with the smallest amount of damage to the rest of the peritoneum. That is, if this mass is a caked mass of bowel it should be gently freed without leaving any kinked small gut if possible, but without tearing things open so as to spread sepsis. I think they believed as we do, because the operation was done at once.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Appendix abscess.

PRE-OPERATIVE DIAGNOSIS SEPTEMBER 1

Appendix abscess.

FIRST OPERATION

Gas-ether. The abdomen was opened and a large free acute appendix with a gangrenous tip was found. There was a small amount of free fluid in the abdomen. The appendix was surrounded by a mass of omentum, which was partially separated from the appendix. The omen-

tum came down in a small pedicle. A ligature was placed about the pedicle and the lower part of the omentum was removed with the appendix. The mesoappendix was clamped and tied. Cigarette wicks were placed in the pelvis and to the stump of the appendix.

PATHOLOGICAL REPORT

Appendix enclosed in inflamed fat.

Microscopic examination shows inflammation of the appendix in fat tissue.

Appendicitis.

J. H. WRIGHT.

FURTHER DISCUSSION

It seems to me that they found what we expected and did the only thing that could be done, and on the theory of chances the boy should go ahead and get well. There is nothing in the record of operation that would give us any idea of any slipping ligature. The complications that we expect following an acute appendix that does not do well are first a spreading of the infection, either as (a) a spreading peritonitis, or (b) a localized infection which is increasing (that is, a pocket in the pelvis or a pocket around the site of the appendix in the flank), or (c) the worst and luckily the rarest of the complications, a spreading of the infection up the veins to the liver with multiple abscesses of the liver. Here they were looking for a pocket in the pelvis. Or second, there may be an intestinal obstruction where a loop of gut is caught at the site of the trouble.

I think always in making an examination or in reading of one when we get the word "some" it is well to throw it out of court for the time being. The observation may not be accurate because the examiner rather wants to find it, and it is only *some* tenderness, so let us forget it. If it is there it will be more than "some" very soon.

As we have the record here there is the beginning evidence of obstruction. Whether that obstruction is due to mechanical interference because of adhesions or to spreading peritonitis is not clear. There seems not quite evidence enough to say it is peritonitis, and I think we should lean toward the side of mechanical obstruction. If so, the thing to do when it reaches the stage where it is obviously not going to take care of itself is to go in a second time, try to relieve the obstruction or give drainage to the gut above.

A SURGEON: Is that obstruction from a band?

DR. YOUNG: Probably not, because the adhesions may have been present around the abscess and not entirely freed at the time of operation, and as they shut down again a loop of the gut which was not freed is kinked. So that it is not a band, but simply a kinking of the gut because

it is held. The second operation I assume is to relieve the obstruction.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Intestinal obstruction.

PRE-OPERATIVE DIAGNOSIS SEPTEMBER 12

Acute intestinal obstruction.

SECOND OPERATION

Gas-ether. Long right rectus muscle retracting incision. On opening the abdomen dilated and contracted intestines were found. By following up the contracted portion an obstruction was found just oral to the cecum. There was a large mass of adhesions tying the ileum down to the ascending colon, and there was considerable omentum attached to this region. A small abscess of the omentum was evacuated. An attempt was made to free the collapsed bowel from the adhesive process and several of the loops were released. The dilated bowel began to collapse and the collapsed bowel showed some signs of filling. During the lysis of the adhesions a hole was torn in the ileum with the escape of intestinal contents. This was held firmly and a few more adhesions freed. Then a Mixer tube was inserted into the tear and tied in place because there seemed to be considerable matting together of the remaining intestine. The loop of bowel containing the Mixer tube was drawn up, sutured to the abdominal wall, and a cigarette drain was placed below it. A drain was also placed in the old appendix wound down to the pelvis. The abdominal wall was sutured in layers and the skin loosely approximated.

FURTHER DISCUSSION

"Dilated and contracted intestines" are the proof of obstruction.

With all the infection that there was there so recently that is a good deal of an operation not only for the patient's strength but for the peritoneum to stand. A hole was torn in the ileum, and if that was above the obstruction drainage was the thing to do anyway.

He died nearly two weeks after the second operation from a combination of sepsis plus the obstruction due to reformation of adhesions. I do not believe that the abscess of the liver spoken about will be shown.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Appendix abscess.
Intestinal obstruction.

DR. EDWARD L. YOUNG'S DIAGNOSIS

Appendicitis.
General peritonitis.
Intestinal obstruction.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

(Appendicitis.)

2. Secondary or terminal lesions

General peritonitis.
Localized chronic peritonitis.
Intestinal obstruction.

3. Historical landmarks

Operation wounds, appendectomy.
Obsolete tuberculosis of a mesenteric gland.

DR. RICHARDSON: In the anterior abdominal wall there was an open wound twelve cm. long, and another in the region of the right lower quadrant, seven cm. long. In the first wound an open loop of the ileum was sutured. This was about nine cm. above the ileocecal valve. The abdomen at the time of necropsy was not distended, and the wall yielded. The peritoneal cavity contained no definite amount of fluid material. The peritoneum generally was coated with a dirty grayish-yellow sticky exudate. This exudate here and there stuck the coils of intestine together. In the neighborhood of the cecum we found several coils of the ileum constricted by old adhesions. This constriction was quite definite, and the intestine above it was distended and below it collapsed. In the region of the cecum and pushing down in the direction of the pelvic cavity was a dirty grayish-red area coated with exudate, apparently the tract along which a surgical wick had rested. The tract ran up to the base of the smaller operation wound.

The stomach was distended and contained a large amount of dirty brownish material. The mucosa was rather flat, and in places there was some question as to whether or not there was slight ulceration. But further examination showed that there were no ulcerations. The mucosa of the small and large intestines was negative.

One of the mesenteric glands showed obsolete tuberculosis.

CASE 9493

First entry. A Canadian of fifty-five, formerly a leather worker, now an inmate of a soldiers' home, was referred from the Eye and Ear In-

firmly June 2, complaining of frequency of urination with burning, and for the past five days chills.

F. H. His father died at seventy-three of "kidney trouble," one sister of "cancer of the liver."

Habits. During the past winter he had taken half a pint of "moonshine" daily.

P. H. His general health was excellent; he was ill for eight weeks in a hospital with typhoid fever seven years ago. He had malaria when in the army in Georgia during the Spanish-American war. He had occasional headaches. He had chronic inflammation of the lacrimal duct, probed frequently. For two years his hearing had been slightly impaired. He had occasional tonsillitis. His teeth had always given him considerable trouble. For many years he had had dyspnea on climbing stairs, and "asthma." All the past winter he had had severe "croup" cough, which did not however incapacitate him from work. During his stay at the Eye and Ear Infirmary he had lost considerable blood from hemorrhoids. Before the present illness he sometimes urinated once at night. Two months ago he fractured several ribs on the left side. Six months ago he weighed 183 pounds, his best weight. His average and present weight was 180.

P. I. The last week in April he entered the Eye and Ear Infirmary with a history of purulent otitis media of a week's duration. At the Infirmary the ear was irrigated for a week. Then a mastoid operation was done on the left ear under ether. For a week following he made very good progress. Then jugular thrombosis developed, with marked swelling and extreme pain. Incision and drainage was done with rapid improvement in the following week, so that he was able to be up and about. Soon after this, however,—i.e., two weeks ago,—he began having frequent urination with extreme scalding, and passed only very small amounts of urine with considerable urgency, every two or three hours by day, every fifteen or twenty minutes at night. With this he began having occasional chills. For a day or so he had had gripping pain in the back. For several days his urine was red. During the past day or two it had been very dark colored. For the past day the frequency and burning had decreased in severity.

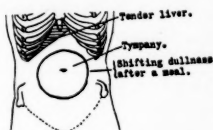
P. E. Well nourished. Skin moist and pale. Mucous membranes pale. Mastoid scar draining on the left. Healed incisions lower on the left neck. Teeth very ill-kept. Marked pyorrhea. Chest clear. Apex impulse of the heart in the



fifth space, nipple line. Percussion measurements as shown in the diagram. Action rapid. Sounds of fair quality. P₂ slightly accentuated. Pulses of poor volume and tension. B. P. 90/55. Abdomen. See

Figure I. Rectal examination. Tenderness. No hemorrhoids. Genitals, extremities, pupils and reflexes normal. Lacrimal duct block.

T. 96.9°-103°. P. 60-127, with daily wide swing, midday rise and evening drop. R. 18-30. Urine. 5 20-80. June 27 a catheter specimen was cloudy, sp. gr. 1.020, a slight trace of al-



bumin, a mass of leucocytes, 20-30 red blood corpuscles. Culture negative. Five other specimens showed sp. gr. 1.008-1.010, a very slight trace to the very slightest possible trace of albumin at three, many leucocytes at all, 20-30 red blood corpuscles at one, a few red blood cells at a second. No sugar. July 5 five c.c. residual of urine by catheterization was slightly cloudy, the very slightest possible trace of albumin, many leucocytes; cultures, I negative, II two colon-like bacilli. Renal function 25% at two tests. Wassermann negative. Blood. Hgb. 70%. Leucocytes 26,000-13,200. Polynuclears 81%. Non-protein nitrogen June 27 50.1 mgm. June 28 54 mgm. X-ray. Marked alveolar absorption from pyorrhea. Left anterior lateral incisor has a definite pocket at its apex.

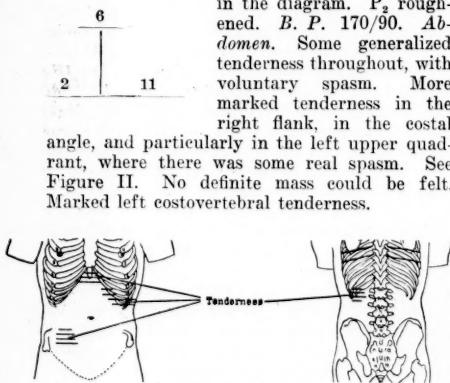
The patient continued to have chills, although the urine was clearing, and in general he seemed much better. During one chill July 1 the temperature was normal. Plans were made for cleaning the teeth and pulling the abscessed one when the temperature should be normal. The mastoid wound was healed by July 3. There was a small discharging sinus three or four cm. long at the base of the jugular incision. The induration along the external jugular seemed to be increasing, and at the top there was redness and tenderness. The urinary progress was very satisfactory. July 7 he was discharged to the Eye and Ear Infirmary.

History of Interval. After three days' treatment of a small abscess in the old mastoid wound he was discharged from the Eye and Ear Infirmary. He was then up and about and comfortable until July 20. Then after taking

a cold drink he was seized with a chill and vomiting, and continued to have attacks of chills and vomiting for ten days, sometimes three or four a day. He also had hiccups, sometimes brought on by a cold drink. During the first ten days of August the chills and vomiting passed off and he suffered from pain in the left flank underneath the last two ribs and extending to the spinal column, at times radiating to the left shoulder, especially during attacks of hiccup; a dull heavy feeling at all times, very much aggravated on motion. During this attack he had not had frequency, burning or painful micturition as at the previous entry. His frequency at present was 4-5 by day, 1-2 at night.

Second admission, August 10.

P. E. (As before except as noted.) An undernourished man with shining eyes and an anxious expression, complaining of pain in the region of the left costal margin. Right conjunctiva injected. A drop of pus in the canthus. Several drops of pus expressed from the lacrimal sac. No inflammation of mastoid scar, and no discharge or inflammation of scar on left ear drum. One almond-sized left axillary gland. *Heart.* Apex impulse not seen or felt. Percussion measurements as shown in the diagram. *P.* roughened. *B. P.* 170/90. *Abdomen.* Some generalized tenderness throughout, with voluntary spasm. More marked tenderness in the right flank, in the costal angle, and particularly in the left upper quadrant, where there was some real spasm. See Figure II. No definite mass could be felt. Marked left costovertebral tenderness.



Before operation *T.* 98.5°-102°, *P.* 80-101, *R.* normal. August 11 *urine*, sp. gr. 1.008, amount not recorded, a very slight trace of albumin, 30-40 leucocytes, 5-6 red blood corpuscles and many bacteria per high power field; no sugar. Before operation *blood*, hgb. 80%, leucocytes 16,200, a few early cells, polynuclears 71%, reds 3,840,000, no abnormality, platelets normal. *X-ray* August 11. A large amount of fecal material present in the colon. Outline of left kidney visible. Right not seen. No shadows.

Dr. Lord noted, "Fullness in the left posterior costoiliac space, and tenderness with spasm below the left costal margin and throughout the left costoiliac space." He also observed a puncture wound in the ninth space, midaxillary line, made outside this hospital.

August 11 operation was done. The next day the patient was fairly comfortable and drinking well. August 13 x-ray showed the left chest less radiant than the right, the diaphragm high on this side, with no respiratory movements. The costophrenic sinus was not obliterated. The intercostal space was narrow. There was no definite pathology in either lung field. Plates of the urinary tract showed the outline of the lower two-thirds of the left kidney apparently normal in size and shape. The right kidney was not visible. No abnormal shadows were present. He had daily slight chills and temperature to 101°. He was given subpectorals. The night of August 20 he was distinctly worse, with subnormal temperature, restlessness, and marked dyspnea. There was some dullness in the right chest. Aspiration yielded bloody thick pus. Bacteriological examination showed colon bacillus. The next morning the patient's condition was very bad. About two liters of pus was aspirated from the right chest with temporary improvement. He died without regaining consciousness, apparently of cardiac failure.

DISCUSSION

BY DR. EDWARD L. YOUNG, JR.

This history consists of one story after another of minor evidences of infection. There are a number of minor ailments, but none of them can be considered very seriously on the story alone.

We have one definite statement of urinating once at night occasionally before his present illness. Because of that and the absence of any other urinary symptoms I think it is fair to assume that he had no urinary symptoms until two weeks ago, when frequency, burning, small amounts of urine with urgency, and chills appeared. That suggests an acute infection of the urinary tract, whether a colon pyelitis or a metastatic infection from his known existing infection in the ear which had spread—the hematogenous or so-called coccus kidney—I think it is impossible to say. We can get that picture with either, but it is more frequently true that the local symptoms go with colon bacillus pyelitis than with a coccus kidney.

This seems a pretty low systolic blood pressure, but he has been sick and in bed, and until we get other evidence to explain it, it seems as though that might be the reason.

I wonder if the shifting dullness is after the half-pint of "moonshine." All I can say is that in a man who weighs 180 pounds, unless he is

well over six feet, it is difficult to tell fluid in the abdomen unless it is considerable. Until we get more evidence I think we will hold that in abeyance.

I should like to look at the chart, because although the temperature with both the conditions I spoke of can run either way, it is more common, I believe, for the colon bacillus infection, the acute type, to go up with slighter variations and come down, and the coccus infection to have the wider variations.—The chart here is the chart of very wide variations, coming down to normal or subnormal every day, the peak as high as 103° on different occasions, and the pulse varying in proportion.

I think there are some things we can say here. A large amount of pus goes with an infection at or near the pelvis of the kidney. The coccus kidney, so-called, is more commonly the type with the infection near the cortex, with, consequently, at first very little pus, which may increase, the urine showing however a pure growth of staphylococci. Any urine which contains pus and from which no growth is obtained is always to be suspected of being tuberculous. We have a second attempt at culture; of the two planted, one was negative and the other showed colon-like bacilli. It is very hard for me to believe that any infection due to the colon bacillus causing as much trouble as this would give negative cultures under any conditions. The bacillus would grow in the urine itself if left alone for a few hours. On the other hand it is very hard to make a diagnosis of acute tuberculosis with a story like this, which comes on abruptly two weeks ago and which gradually quiets down. It has not disappeared, but it is beginning to decrease in severity.

This is presumably a two-hour renal function, so that it is low; but not so low that we can be very didactic about what it means.

The non-protein nitrogen is high in the same way that the renal function of twenty-five is low. That is, we cannot say a lot about either one except that they are definitely abnormal.

I should like to know if he had any smears of the urinary sediment, or if any cystoscopy was done at this time.

MISS PAINTER: No cystoscopy is recorded before operation, and no stained smears were made of the urinary sediment.

DR. YOUNG: It sometimes happens that a growth will not take place, whereas a stained smear will show clearly what type of organism is present; a stained smear is always worth doing. I think we have to assume that we have all the facts obtained at this time. It is hard for me to believe, with this story, that this is tuberculosis, and hard to believe that there was not some way of getting the organism from this. Those two facts do not hold together.

A SURGEON: Could you get that kind of chart from tuberculosis?

DR. YOUNG: It is a very unusual thing to have as acute a story as this from tuberculosis of the urinary tract. I do not remember ever having seen it.

In the first entry there was no record of pain in the flank or in the costovertebral angle. The first evidence we have of pain is at the time of his second admission. We always have some fact which is not consistent with the picture that presents most strongly, and it seems to me that the fact we have to throw out is the negative evidence as to the organism. The story so far most strongly suggests to me an infection which gave him the acute hematogenous kidney, which quieted down so far as the local symptoms were considered, but the infection then spread into the perirenal tissue. So that at the second entrance he has the evidence there, plus the evidence from local inflammation.

This blood pressure measurement is very much higher than the last.

In the second diagram it seems to me we have very good evidence of spreading infection to the perirenal tissue.

I should have expected a higher white count with a perinephritic abscess. It is true that tuberculosis can cause a perinephritic abscess, so that I cannot entirely eliminate the fact that they were unable to get any definite organism the first time. I see nothing for it but operation to drain what I believe is there.

DR. BARNEY: It seemed to me like a perfectly clean-cut case. I did not regard tuberculosis as being very probable. I think it was a clean-cut case of infection from a tooth or ear, with involvement of one or both kidneys.

DR. YOUNG: That is throwing out that negative culture, as I do.

DR. BARNEY: Yes. He was cystoscoped, but nothing much was found. Then I saw him when it was a little too late to do anything.

DR. YOUNG: Cystoscopy ought not to give us anything particular. It would tell us whether the thing was purely unilateral.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Perinephritic abscess.

PRE-OPERATIVE DIAGNOSIS AUGUST 11

Perinephritic abscess, left.

OPERATION

Gas and oxygen. Four inch oblique incision parallel to and just below the twelfth rib. The kidney itself was freed from its fatty capsule in both anterior and posterior surface, the entire lower pole being exposed. There was no thickening and no evidence of any pus. The kidney itself seemed somewhat enlarged—about six inches long, three inches wide, and two inches

thick. It was evidently an infected kidney but not a pus kidney. The wound was closed in layers.

CYSTOSCOPY AUGUST 13

The cystoscope passed easily. There was slight redness of the internal orifices of the ureters. Both ureters were easily catheterized. The flow from each was normal. There was no retention in the right pelvis, and its capacity was small. Split function and right pyelogram done.

FURTHER DISCUSSION

DR. BARNEY: I did not see the patient before the operation and did not do the operation. I saw him after all this had been done.

DR. YOUNG: I expected to find pus. Now that I know about the operation I think I should have to go over the same argument that I did before. It still seems to me that that might have been the starting-point of the whole story,—that is, the infected kidney with a perinephritic infection. The operation proves to us that it has not gone on to acute suppuration, so that where it is localized I do not think we can tell. It is true that the lymphatic communication above and below the diaphragm is enough so that infection may have gone above the diaphragm without evidence being found in the perinephritic spaces.

A PHYSICIAN: They apparently tapped the chest.

DR. YOUNG: We have no report other than this mention of it. I imagine if anything had been found we should have heard from it.

Judging from the record there is nothing of particular interest in the x-ray plates. The kidney plate shows no shadows, and following the line of the course of the ureter we find nothing there. There is an outline of the left kidney and just a portion, obscured by the descending colon, of the right. There are no shadows. The outline is normal so far as we see it. There are no plates of the chest.

I think I have nothing to change in my argument so far, and no explanation for the infection above the diaphragm which was definitely here other than the possibility of infection spreading from the kidney. But Dr. Barney apparently made another diagnosis. I should be glad to hear his diagnosis and argument.

DR. BARNEY: I recall this man very vividly. When I saw him I heard this story about the operation and the fact that they found no pus around the kidney. At that time it did not seem to me that the kidney lesion was the important thing. When I saw him he was practically moribund, had a distended, extremely tender abdomen; and knowing the history of mastoiditis and jugular thrombosis from teeth, etc., I committed myself to the diagnosis of a

surgical abdomen following or accompanying general septicemia. My resident, Dr. Gilbert, had made a diagnosis of splenic abscess previous to my seeing the man. I do not know just what he based it on beyond the fact that the man was extremely tender in the left flank and left costovertebral angle. It struck me that he had a general peritonitis and a surgical abdomen. The whole picture seemed to me of coccus origin following an ear infection.

DR. YOUNG: There was a good deal more in the line of abdominal symptoms than is recorded here.

DR. BARNEY: You would not gather the picture from this record, but he had an extremely tender abdomen, especially over the suprapubic space.

DR. YOUNG: Certainly, as Dr. Barney describes it, that seems to be the condition, but only one part of it, because they have pus above the diaphragm, and it seems to me it is general infection with colon bacillus.

DR. CABOT: Your diagnosis remains the same?

DR. YOUNG: Yes. Hematogenous infection of the kidney from the infected ear, with colon bacillus a secondary invader.

DR. RICHARDSON: Didn't you get the bacillus?

DR. YOUNG: We didn't get any. There were three negative cultures and one positive from the blood.

DR. RICHARDSON: Unfortunately we didn't get one here.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Jugular thrombosis.

Pyemia.

Pyelitis.

Empyema.

Operation, exploration for possible perinephric abscess, left.

DR. EDWARD L. YOUNG'S DIAGNOSIS

Hematogenous infection of the kidney with perinephritis.

Peritonitis.

Empyema.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesions

Purulent infiltration and necrosis of the retroperitoneal tissue in the region of the left kidney, spleen and pancreas.
General fibrinopurulent peritonitis.

2. Secondary or terminal lesions

Abscesses of spleen.

Empyema, right.

Acute pleuritis, left.

Slight acute glomerulonephritis.
Soft hyperplastic spleen.
Hemochromatosis of liver, pancreas and retro-peritoneal lymph glands.
Cirrhosis of liver.

3. Historical landmarks

Scar of operation wound.

DR. RICHARDSON: There was a scar on the left side extending from a point seven cm. above the crest of the ilium backward and upward. In the region of the left mastoid there was a scar-like area of depression. The suture marks were still visible along the first scar. The skin of the face, arms, and hands showed a faint brownish color, and there was a slight suggestion of this on the lower extremities. Had this man been out-of-doors?

DR. YOUNG: He was a leather-worker; what that means I don't know. Perhaps it was the moonshine.

DR. RICHARDSON: Perhaps. He had cirrhosis anyway.

The peritoneal cavity contained much drab colored purulent fluid material, and the intestines were stuck together with purulent exudate.—a frank fibrinopurulent peritonitis. The esophagus, stomach and intestines were negative. The retroperitoneal glands were slightly enlarged, up to three or four cm. They were a rich chestnut brown. The retroperitoneal glands and the liver had the same color.

The diaphragm was at the third interspace on the right and the fourth on the left. In the right pleural cavity there was still about 800 c.c. of pus. In the left there was a small amount of thin cloudy fluid and fibrin. There were no old adhesions on the right, a few on the left. The lungs themselves presented no definite lesions. So we have an empyema on the right, and fibrinous pleuritis on the left.

The circulatory apparatus below the collar-bones was negative. We were not permitted to examine the head.

The liver weighed 2236 grams; that is slightly enlarged. The surfaces were a little granular, the tissue a little more resistant than usual, and the liver generally of a rich chestnut-brown color.

The spleen weighed 369 grams, moderately enlarged, the tissue brown-red, a little soft. In the region of the lower pole were several deep excavations which contained pus,—abscesses.

The combined weight of the kidneys was 270 grams, a fair weight. The capsule of the right stripped, leaving a pale smooth surface. The capsule of the left was found stripped, leaving

generally a fairly smooth surface, but over a small area there was a rather thick dirty brownish-red adhering layer of blood-clot-like material. The tissue of each kidney was negative except for some proliferation of the endothelial cells of the capillaries of the glomeruli, a slight glomerulonephritis.

The bladder showed nothing except a few small velvety red patches on the mucosa.

On exploration of the scar on the back we found that this extended into the region of the left kidney. In the retroperitoneal tissues all about the pelvis of the kidney and in the kidney, pancreas and spleen there was a large collection of pus which was associated with necrosis of the peritoneum and extension of the process into the peritoneal cavity.

Microscopical examination showed that this rich brown color of the tissue of the liver and glands was that which goes with hemochromatosis due to the presence of pigment bearing cells. In association with this there was cirrhosis of the liver. In the pancreas we found pigment bearing cells, but no definite cirrhosis. If we had found sugar this case would be bronzed diabetes. No sugar was found, so it is cirrhosis with hemochromatosis.

DR. YOUNG: Did you make a bacteriological study?

DR. RICHARDSON: None was made, for some reason.

DR. YOUNG: Then the line of reasoning that I used is good as far as your anatomical side is concerned. That is, an infection starting in the ear and spreading from the kidney first through the retroperitoneal region to the peritoneum and then anywhere you will, to the pleural cavities.

DR. CABOT: Why didn't they strike all that pus when they were operating?

DR. YOUNG: It may not have been there as frank pus at that time.

A PHYSICIAN: Is there any evidence of infection of the kidney?

DR. YOUNG: A coccic kidney would not necessarily show any great amount of trouble.

DR. CABOT: That is, it passed through the kidney into the perirenal tissues?

A PHYSICIAN: Don't you usually get small purulent foci in the kidney?

DR. YOUNG: Yes, but they may be microscopic and disappear in six weeks' time. He was here nearly two months.

DR. RICHARDSON: You mean that he got his infection through his kidneys? I think Dr. Barney's is a defensible hypothesis, that the original infection may have been the infection of the ear and mastoid.

DR. YOUNG: I think we have to assume it came through the kidneys because we have evi-

dence of plenty of infection from the blood and pus in the urine.

DR. RICHARDSON: With such an infection as that we should expect to find some anatomical basis.

DR. YOUNG: I don't think so. I think it might have been a microscopic infection in the kidney.

DR. RICHARDSON: And produce as much pus as that?

DR. YOUNG: Yes, it might. It was over two months' time. By June 25 it was already quieting down, so that he has had six weeks of freedom from symptoms and a chance to let the kidneys get well.

DR. RICHARDSON: It may be that the kidney lesions you mention would clear up in that time and present a kidney in which we could find nothing. I cannot say. Anatomically there is no evidence that those kidneys have ever been very sick.

DR. YOUNG: You are more inclined to believe that it is a straight metastatic peritonitis?

DR. RICHARDSON: It is pretty hard to answer that question. You have operated on this man. He is stated to have had an infection. Had that absolutely cleared up?

DR. CABOT: You think the operation may have given him the infection?

DR. YOUNG: There was time for it.

DR. RICHARDSON: That is the question. Then a peculiar thing is that we have the empyema on the right, and only a slight pleuritis on the left. I found 800 c.c. of pus at necropsy. When did that empyema appear?

DR. YOUNG: That was just post-operative,—the day before he died they first got actual evidence.

A PHYSICIAN: The anatomical findings suggest that the peritonitis was post-operative too, don't they?

DR. RICHARDSON: Possibly.

DR. BARNEY: Isn't it possible, without making sections of the whole kidney, to overlook a small healed focus? I remember seeing these kidneys at necropsy. They looked entirely normal.

DR. CABOT: There are three possibilities that have to be entertained: first, that the thing started in the mastoid and jugular, went down through the kidney and spread to the rest of the regions described. Or second, that it went to the mastoid and stopped there. Then he was operated on, and that gave him sepsis. Then a third possibility is that it went straight from the mastoid into all these other places without going into the kidney at all.

DR. RICHARDSON: As septicemias do. That is, it is an expression of septicemia, the original focus being the ear and mastoid.

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DIAGNOSIS AND SURGICAL TREATMENT OF MALIGNANT TUMORS OF THE KIDNEY

STEVENS, WILLIAM E. (*Journal of Urology*, August, 1923), says hematuria, pain, palpable tumor and characteristic deformity of the renal pelvis, shown by pyelography, are the cardinal symptoms.

Hypernephroma constituted 80 per cent., carcinoma 2 per cent., and papillary epithelioma of renal pelvis make up the types; these are from a series of 413 cases.

Operation is the only aid; this should be undertaken unless associated with marked metastases.

[B. D. W.]

FURTHER OBSERVATIONS ON THE BLOOD PRESSURE IN CASES OF URINARY OBSTRUCTION

O'CONNOR, VINCENT J. (*Journal of Urology*, August, 1923), says complete drainage of the bladder in patients suffering from urinary retention is attended by a marked fall in systolic blood pressure during the first 48 hours. During this period the renal function is diminished, as shown by the phenolsulphonphthalein test and the quantitative determination of urea in the blood. However the retained urine is gradually evacuated the decrease in pulse pressure will be less marked and the renal function only slightly diminished.

[B. D. W.]

EPISPADIAS IN WOMEN: REPORT OF A CASE

LOWER, W. E. (*Journal of Urology*, August, 1923), says true epispadias in the female is an exceedingly rare condition, though it may be more common than we have believed. We would classify as epispadias any type of defect of the dorsal wall of the urethra, provided the bladder walls are intact. Most plastic operations accomplish little more than a covering of the exposed parts. Transplantation of the ureters into the large intestine ensures relief from incontinence. The transplantation of each ureter should be done at a separate operation to avoid the possibility of a temporary suppression of urine and to diminish the post-operative reaction.

[B. D. W.]

REPORT OF CASES OF MALIGNANT GROWTHS OF THE BLADDER TREATED BY RESECTION AND RADIUM

BUGBEE, HENRY G. (*Journal of Urology*, August, 1923), states that in cases of extensive carcinoma of the bladder, when metastasis has taken place, one's effort should be directed toward making the patient as comfortable as possible. Often this may best be attained by simple bladder drainage.

In extensive carcinoma of the bladder without metastasis, in lieu of total or subtotal cystectomy, it is possible in some cases to destroy the growth by re-

peated insertions of radium needles—if one bears in mind that he is trying to destroy the growth, not the patient, by not too massive a dose, but by repeated insertions at sufficient intervals, giving free bladder drainage to allow for sloughing and infection, every effort being exerted during the process to increase body elimination.

A circumscribed carcinoma should be removed by resection, if possible. Recurrences after operation are less resistant than the primary growth, sometimes yielding even to fulguration. A careful watch of all cases following operation should be maintained that recurrences may be detected as early as possible, and destroyed, thus minimizing the chances of metastasis.

The insertion of radium needles into the bladder wall about the line of resection causes the formation of sloughs, which have in some cases remained for four months. Such a procedure is valuable in minimizing the chances of local recurrence by destroying stray cancer cells, and involves no risk or discomfort. Malignant papillomata should be removed by resection, the line of resection being fortified by the insertion of radium needles.

While the cases reported are too recent to warrant the drawing of conclusions, the course of these cases so treated has been decidedly more satisfactory than in those treated by methods formerly employed.

[B. D. W.]

THE EVIDENCE OF CURE IN THE ANTIMONY TREATMENT OF KALA-AZAR

MACKIE and PATUI (*Ind. Med. Gazette*, July, 1923) outline the present-day treatment of kala-azar with antimony. The value of antimony salts in this disease is a well-established fact, but its action is not infallible. The generally accepted "full course of treatment," 200 c.c. of a 1 per cent. solution of sodium antimony tartrate, is in many instances not curative. Each case must be treated on its merits. Treatment should be continued until the clinical criteria of cure are evident—cessation of fever, increase in weight, reduction in size of the spleen, increase in the leucocyte count, loss of the characteristic epidermal signs (e.g., rough, scanty, and starting hair, darkening and roughening of the skin). The only real evidence of cure is the failure to grow leishmania from material obtained by spleen puncture. Microscopic examination of the spleen juice is not sufficient. Incompletely cured cases act as chronic carriers of infection in the community.

[L. D. C.]

SERODIAGNOSIS OF RETROPLACENTAL BLOOD

As a result of extensive investigations, bacteriologic and serologic, in hospitals of Essen, HOHN and GUMBERT (*Munch. med. Woch.*, September 7, 1923) conclude that retroplacental blood is suitable for the serodiagnosis of syphilis, and recommend that nurses be instructed in the proper method of obtaining it for that purpose in obstetric cases.

[R. M. G.]

STUDIES ON THE URETER AND BLADDER WITH ESPECIAL REFERENCE TO REGURGITATION OF THE VESICAL CONTENTS

GRAVES, ROGER COLGATE, and DAVIDOFF, LEO MAX (*Jour. of Urol.*, Sept., 1923), state that the work which forms the basis of this communication emphasizes again that regurgitation is an experimental fact. The conditions that favor its occurrence, however, have been less well understood, and it is with these that we are particularly concerned. In the case of normal rabbits, we found that the ease with which regurgitation occurred, depended on a variety of factors. Chief among these was good bladder tone, which seemed to be indispensable. We

learned, for example, that those bladders which were relatively empty and contracted at the beginning of the preparation produced reflux twice as frequently as those which had been recently distended with large amounts of urine. Active pressure usually caused regurgitation; passive pressure never. They concluded also that the degree of ureteral activity had relatively little bearing upon regurgitation, antiperistalsis in a normal ureter has never been noted, and in no way concerned with regurgitation. Reflux has been seen to occur as a result of acute urinary obstruction. Regurgitation of vesical contents in the ureter may be observed in the normal intact, unanesthetized subject. Thus on the basis of this work it is believed that bladder regurgitation may be accountable for ascending infections of the urinary tract, particularly in cases of vesical-neck obstructions.

[B. D. W.]

BILIARY STASIS AND COLIC

ZANDER, of Darmstadt, discusses (*Munch. med. Woch.*, September 14, 1923) the subject of recurrent colic after gallstone operations, which he believes often due to spasm of the sphincter of the duodenal papilla. This, he thinks, can be avoided by dilating or splitting the papilla or by choledochoduodenostomy. Spastic biliary stasis may sometimes simulate cholelithiasis, and should be ruled out before operation.

[R. M. G.]

INFLUENZA IN THE TROPICS

HOFFMANN, from recent experience in Havana, describes (*Munch. med. Woch.*, September 21, 1923) the blood picture of influenza in the tropics, which is characterized by marked leucopenia. Eosinophiles are at first absent, but with recovery are increased. During convalescence there is a relative lymphocytosis. The erythrocytes and hemoglobin are not notably altered.

[R. M. G.]

AN ANTISEPTIC PYELOGRAPHIC MEDIUM

CUNNINGHAM, JOHN H., GRAVES, ROGER C., and DAVIS, TENNEY L. (*Jour. of Urol.*, Sept., 1923), recommend the use of 1:3000 mercuric iodide in 12 per cent. sodium iodide solution, as an antiseptic pyelographic medium, for two important reasons: It reduces to a minimum the risk of introducing infection; it provides some degree of positive benefit, apart from diagnosis, in cases in which infection already exists.

[B. D. W.]

TEMPORARY SUPPRESSION OF URINE FOLLOWING DOUBLE PYELOGRAPHY

MORTON, HENRY H. (*Jour. of Urol.*, Sept., 1923), reports a case of temporary suppression of urine following double pyelography. Injection was by gravity. Suppression was complete for two days. Then gradually the excretion increased. There was a shadow noted in lower end of right ureter.

[B. D. W.]

A CASE OF HEMATURIA FROM LEAD POISONING

OCKERBLAD, NELSE F. (*Jour. of Urol.*, Sept., 1923), reports a case in which the patient had casts and albumin in his urine in addition to blood. He was immediately given daily injections of 0.6 gram of purified hyposulphite of soda intravenously, and in the second day the urinary hemorrhage ceased and there was no return of it. The patient was kept on these injections as above for two weeks. He made a good recovery; is free from symptoms three months

after discontinuing treatment and no longer shows stippling of the red cells. This type of treatment has also been used in a large number of cases of arspenamine dermatitis or exfoliative dermatitis.

[B. D. W.]

TREMENDOUS BILATERAL URETERAL DILATATION IN AN ADULT

DAVIS, EDWIN (*Jour. of Urol.*, Sept., 1923), reports a case of unusual interest because of the tremendous size of the ureters, because symptoms did not develop until the age of 24, and because the patient lived to 41 in a fair degree of health.

[B. D. W.]

PROGNOSIS AND TREATMENT OF FRACTURES OF THE LEG AND ANKLE

ASHHURST, A. P. C., AND CROSSAN, E. T. (*Arch. of Surg.*, Nov., 1923), present end-results in one hundred patients and draw the following conclusions:

Early reduction of all gross displacement is urged; and in ankle fractures, anatomic reposition should be the goal in view. Stimson splints of plaster of Paris are far superior to circular cases, because permitting proper care of the soft parts at suitable intervals, and preventing atrophy during the process of union, as well as stiffness and swelling during convalescence. The Delbet apparatus has certain additional advantages, notably that of allowing active motion of the knee and ankle joints while the fracture is uniting, as well as hastening the process of union, and shortening the period of disability. In compound and in simple comminuted fractures, traction by the Steinmann nail has given admirable results. If direct bone fixation is adopted in compound fractures which require immediate open reduction, the fixation apparatus should be removable as soon as fair union is secured. The period of disability for fractures of the shafts of the leg bones in this series averaged (in simple fractures) three and eight-tenths months, nearly a month less than the average period of disability shown by the statistics of the American Surgical Association; and in compound fractures it averaged five and a half months, or about six weeks less than for corresponding cases tabulated by the American Surgical Association. The period of disability for ankle fractures averaged approximately the same in both series.

[E. H. R.]

THE ALDEHYDE TEST IN MALARIA

LAL (*Ind. Med. Gaz.*, Aug., 1923) reports on a study of the "aldehyde test" in malaria. This test was introduced in 1922 by Napier, who noted solidification and marked opacity of the serum of kala-azar cases when a few drops of formalin were added. The writer's object in this study was to determine whether a positive aldehyde test was a group reaction, present in malaria as well as in kala-azar, or a specific phenomenon for *Leishmania donovani*. He finds that the aldehyde test is not positive in malaria, although in some cases a slight opacity of the serum can be demonstrated. The reaction apparently does not depend upon the patient's temperature, or upon the size of the spleen or the liver, or upon metabolic processes.

This study thus indicates that the aldehyde test of Napier is of value in the differential diagnosis between malaria and kala-azar.

[L. D. C.]

THE DISSEMINATION OF HUMAN HELMINTHIC INFECTIONS BY ANIMALS

RAMSAY (*Ind. Med. Gaz.*, Sept., 1923) examined the gastro-intestinal tracts and contents of pigs and

other animals for worms and ova pathogenic to man. In eleven pigs examined post-mortem no adult hookworms were found, but in all of them hookworm, round worm and whipworm ova were found. It is evident, then, that hookworm ova swallowed by pigs, can pass through the gastro-intestinal tract intact and continue to carry out their life cycle. The pig is a serious menace to the health of a tea-garden community in India. In one garden supervised by the writer practically every coolie over five years old is anaemic. After gorging himself on human faeces from the jungle around the lines, the pig returns with his infected bowel to disseminate his helminthic and protozoal infections around the coolie huts. Experiments with jackals, dogs, sheep and goats have shown that their stomachs and rectal contents contain hookworm, round worm and whipworm ova, the faeces being positive for hookworm larvae in culture. Cows are occasionally infected.

[L. D. C.]

POSTOPERATIVE RENAL HEMORRHAGE

JIANG, A. (*Surg., Gynec. and Obstet.*, Nov., 1923), draws the following conclusions at the end of his article:

We distinguish two kinds of hemorrhages after nephrotomy:

1. Primary hemorrhage, which appears after a few hours or during the first day of the operation and is of arterial origin;

2. Secondary hemorrhage, which appears during the first 10 to 12 days after operation and is of venous or arterial origin. Concerning pathogenesis and treatment opinions differ.

(a) Legueu, Papin, Morel, Langemak, and Wild-boltz, and others, believe that the hemorrhages are caused by infarct formation which sometimes produces late hemorrhages and is most probably influenced by infection.

(b) Rehn believes that the hemorrhages are the result of disturbance of circulation and secretion, and recommends as a means of preventing them the physiological fixation and drainage of the kidney.

(c) I affirm that hemorrhage after nephrotomy is the result of the cutting of intrarenal vessels, and that infection causes at the same time the breaking down of the renal suture and the detachment of the clot that had been formed. To avoid these hemorrhages I recommend that U-shaped sutures be used and passed through the cut surfaces of the kidney.

[E. H. R.]

A CONSERVATIVE TREATMENT OF CARBUNCLES

LEWIS, R. W. (*Annals of Surgery*, Nov., 1923), states that:

1. Only three reports of carbuncles treated by x-ray were found in the literature.

2. Sixteen unselected cases of carbuncles treated by x-ray are here reported.

3. Only two of these sixteen cases required operative treatment.

4. Diameters of induration increased more than 2 cm. after x-ray treatment in only two cases, and in one of these was probably due to a too narrow protecting of the field of the x-rays in giving the treatment.

5. Sloughing and suppuration, and the skin sinuses through which this took place, were surprisingly small in the small and moderate sized carbuncles.

6. The very large carbuncles resolved into enormous, sharply demarcated abscesses, which drained satisfactorily through sinuses formed by sloughing of the overlying skin.

7. Pain was relieved following the x-ray treat-

ment in the majority of the cases, but this did not occur invariably.

8. The duration of the small and moderate sized carbuncles seemed much shorter with x-ray therapy than under operative treatment.

9. The duration of the very large carbuncles seemed about the same with x-ray or operative treatment.

10. Cosmetic results of x-ray treatment were far superior to those of operation.

11. Great preference for the x-ray treatment was expressed by patients with experience in other forms of treatment.

12. The method seems relatively safe. The comparative absence of traumatism, as compared with operation, seems a protective measure of importance.

"This is obviously too small a series from which to attempt to draw any sweeping conclusions. Moreover, we have in these cases no actual proof of the value of x-ray, since it did not seem justifiable to run any control cases. Nevertheless, from the evidence submitted, we would seem justified in feeling that x-ray exerts a powerful influence on the progress of carbuncle. Though in a few cases operation seems unavoidable, x-ray in the majority of cases appears to bring a speedier cure, gives a far superior cosmetic result, and has been preferred by patients familiar with both methods. The comparative absence of trauma in this method, as compared to operation, is a protective measure. We would therefore conclude that in most cases its use is to be preferred to operation." [E. H. R.]

TUBERCULOUS TENOSYNOVITIS OF THE HAND

KANAVEL, A. B. (*Surg., Gynec. and Obstet.*, Nov., 1923), presents a very valuable article on this important subject. He speaks briefly of the etiology and pathology, and more in detail of the treatment, which consists in an operation done under local anesthesia, with the idea of entirely dissecting out the tuberculous tissue in and around the tendon sheaths. In doing this operation, the first structure sought is the median nerve, which is followed down into the palm, the greatest care being exercised to preserve every filament. The author is in the habit of using a pair of spectacles which magnify the tissue about one and one-half times in order to be sure that he preserves every nerve filament. This nerve is carefully isolated and the dissection of the fingers then proceeds. This is done with a very sharp knife and every vestige of tuberculous tissue is removed, as much in one piece as possible. No splint is applied, and the patient is told to use the hand for ordinary simple purposes as soon as it is healed. The results of this treatment have been particularly satisfactory, only two patients out of the number having recurrence. The article is of considerable value. [E. H. R.]

A CLINICAL STUDY OF RADIUM THERAPY IN CARCINOMA OF THE RECTUM

KELLY, H. A., AND WARD, G. E. (*Surg., Gynec. and Obstet.*, Nov., 1923), draw the following conclusions from their work:

"Radium used alone or with some operative procedure is par excellence our most valuable therapeutic agent in the treatment of cancer of the rectum in all stages. Its therapeutic value lies both in its palliation and its high percentage of cures—11 per cent. of those treated. As a palliative measure it benefited 62 per cent. of all the cases. In the hopeless group radium is valuable in giving relief to various symptoms and affording comfort for the remainder of life. There are a number (27 per cent. of the total), who did not respond, and these we term for the present as not 'radio-sensitive.' In this group the tumor was fixed in 40 per cent., and practically all were well

advanced. The one way to determine the radio-sensitiveness of a tumor is a substantial treatment followed by careful observation; in other words, the great benefits to be expected from radium justify its trial in every case of cancer of the rectum. . . . Finally, in this series radium therapy has been helpful in obtaining 11 per cent. cure and a 62.5 per cent. palliation of all cases in the series of 200 suffering from carcinoma of the rectum treated in our hospital." [E. H. R.]

AN INQUIRY INTO THE USEFULNESS OF THE DUODENAL TUBE

FINKELSTEIN, M. (*Surg., Gynec. and Obstet.*, Nov., 1923), draws the following conclusions from his investigation:

"In my investigation five hundred cases have been studied. I feel satisfied to report that duodenal drainage is a helpful clinical method in the diagnosis and treatment of early diseases of the biliary system.

"The whole procedure can be carried out in 1½ hours (average) and the patient does not suffer any inconvenience or discomfort; there are no after-effects and the patient is free to get about and attend to his duties after the treatment.

"Cases of suspected gall-bladder lesions that have come to operation have had the pre-operative duodenal drainage diagnosis definitely confirmed. It will not be long before this method will be recognized in hospital and private practice as a necessary measure in the differential diagnosis of abdominal disease.

"It presents an important means of determining the presence of parasites and their ova or focal infection of the biliary tract, conditions which may be of the greatest diagnostic and therapeutic value in obscure conditions, such as arthritis, neuritis, etc.

"Therapeutically, the method has proved to be extremely valuable in the early stages of catarrh and infection of the biliary tract, biliary stasis, chronic biliousness, and severe migraine. The duodenal tube cannot, by any manner or means, supplant surgery, where gross pathological lesions exist, such as cholelithiasis, empyema of the gall-bladder with cystic duct obstruction or gangrene of the gall-bladder, but where surgical interference is contraindicated, because of a heart or kidney complication, the tube offers an alternative which in not a few cases affords much relief. In cholecystectomized patients who still complain of trouble in the right hypochondrium, the tube has been very useful in clearing up the stasis and infection, which could not be treated surgically." [E. H. R.]

ACTINOMYCOSIS OF THE HEAD AND NECK

NEW, G. B., AND FIGL, F. A. (*Surg., Gynec. and Obstet.*, Nov., 1923), present a report based on 107 cases taken from the Mayo Clinic and state that the clinical picture of a rapidly growing, malignant tumor may be so closely simulated by actinomycosis that a clinical diagnosis of such a tumor should be guarded. A tumor or gland of the head or neck which is clinically malignant, but does not prove so microscopically, is usually actinomycotic, and further study of the tissue may demonstrate this. The finding of a sulphur granule on exploring a tumor, draining a phlegmon, or currying a sinus of the head or neck, frequently clears up many indeterminate diagnoses. A reduction in the mortality of the disease depends on its early recognition and the institution of proper treatment. [E. H. R.]

THE TREATMENT OF DUODENAL FISTULA

CAMERON, A. L. (*Surg., Gynec. and Obstet.*, Nov., 1923), cites the great difficulty in securing closure of duodenal fistulae and the distressing condition of

the patient when one exists. He reports a case of his own in which the condition was entirely relieved in a very short time by the institution of a continuous suction by means of tubes passed into the fistula through the abdominal wall connected up with an electrically driven motor which produces constant suction. The case made a rapid recovery with complete healing of the wound in a comparatively short time. A report of 28 cases from the literature is made, and a bibliography of 26 references is appended. The article is of decided value. [E. H. R.]

BREECH PRESENTATIONS TREATED BY PROPHYLACTIC EXTERNAL VERSION

RYDER, G. H. (*Surg., Gynec. and Obstet.*, Nov., 1923), presents a report of 59 cases so treated and draws the following conclusions:

The safest method of treating breech presentations is by prophylactic external version.

External version not only reduces the fetal mortality, but renders labor shorter and more natural for the mother.

The operation is safe, if done without force.

The best time for performing external version is usually the seventh and eighth calendar months.

The operation is generally quite easy and may usually be performed without ether.

When at all difficult, a general anesthetic should be used. Under this, in most cases, except late in labor, external version is easily performed.

Force should never be used. If version cannot be accomplished without force, the operation should be given up.

When external version is once performed, the fetus occasionally resumes its original presentation, but usually does not. This is more likely to occur when the version is very easy. Consequently, the fetus may be re-turned as frequently as necessary, even early in labor. When external version is difficult, spontaneous reversion is not apt to occur.

External version performed early gives warning of disproportion between the head and the pelvis, by observation of the way in which the head settles into the pelvis, or may be crowded in by the obstetrician.

Finally, with careful observation in the latter months of pregnancy, external version should reduce the fetal mortality of breech presentations approximately to that of cephalic presentations; and furnishes one more argument for careful antepartum examinations. [E. H. R.]

RETROPERITONEAL OPERATION FOR SUBPHRENIC ABSCESS

NATHER, C. AND OCHSNER, E. W. A. (*Surg., Gynec. and Obstet.*, Nov., 1923) report in detail two cases and present an article well illustrated by excellent drawings showing the operative procedure, and draw the following conclusions:

1. Careful, exact clinical observation of cases following appendicitis which run an abnormal course leads to an early diagnosis in the larger percentage of cases of complicating subphrenic abscess.

2. In those cases in which clinical observation does not lead to a diagnosis, and it is necessary to resort to exploratory aspiration, it should not be carried out transperitoneally but retroperitoneally beneath the diaphragm.

3. In cases of subphrenic abscess it is unnecessary and dangerous to use a method of drainage which exposes uninvolved pleura (60 to 70 per cent.) or peritoneum to infection.

4. Especially in those cases of secondary abscesses in the subphrenic region complicating appendicitis, it is necessary to use an operation by which an abscess in subhepatic and suprahepatic spaces can be drained at the same time. This combination occurs

in more than 50 per cent. of subphrenic abscesses complicating appendicitis. The retroperitoneal operation fulfills these requirements.

5. A co-existing empyema can also be drained through the same incision without further resection of ribs.

6. The retroperitoneal operation is surgically and anatomically the operation of choice in the drainage of those subphrenic abscesses complicating appendicitis. [E. H. R.]

SUPPURATIVE TENOSYNOVITIS OF THE FLEXOR MUSCLES OF THE HAND

CLEVELAND, M. (*Arch. of Surg.*, Nov., 1923), bases his article on the study of fifty-seven consecutive cases observed at the Presbyterian Hospital in New York from January, 1916, to January, 1923.

The author believes that the suppurative infections of the tendon sheath naturally fall into two groups. The primary group, in which the infection is primarily that of the tendon sheath, usually gives the classic picture of tenosynovitis. In this group lies the greatest opportunity for obtaining good results by means of proper treatment. The second group is that in which the sheath is usually invaded as an extension from some other pre-existing suppurative process in the hand or distant focus. It is frequently not recognized until late and has a much less hopeful prognosis than the primary group. The flexor tendon sheaths are most frequently infected from wounds at the digital flexion creases. Wounds at these points should always be considered as predisposing to suppurative tenosynovitis. Time must not be lost in making a diagnosis, as every hour lost diminishes the patient's chance of a good end-result. Wounds due to human bites should be primarily debrided. The hemolytic streptococcus is the most frequent invading organism. The wound healing and end-results have varied considerably with the different micro-organisms. Conservative treatment in gonococcus tenosynovitis, owing to the resemblance of this condition to tenosynovitis due to the pyogenic micro-organisms, is not without danger. A tendon sheath already infected may be secondarily contaminated by another variety of micro-organism through careless technic. Such cases frequently have had end-results. Tendon sheath infections which are temporized with by means of inadequate and poorly placed incisions usually do badly. Employment of special delicate instruments, careful dissection in a bloodless field, and the use of small strips of binding silk and rubber dam as drainage material, to be early removed, are recommended. A revised technic described above, in which a painstaking effort is made to keep the wounds uncontaminated, has yielded 100 per cent. better results than our previous methods. Early active motion, following almost immediately after recovery from the anesthesia, is most advisable. Soaking in hot solutions will aid materially in attaining this objective, but a great deal depends on the coöperation of the patient. It stands to reason that these patients should be hospitalized, as the foregoing treatment cannot be carefully supervised in ambulatory cases. They should be kept in the ward until their wounds are almost, if not quite, healed, as an important safeguard against secondary contamination. The presence of, or a tendency to, chronic arthritis in the fingers makes a poor prognosis for the recovery of function.

In recapitulation, to attain optimum results in suppurative tenosynovitis the desiderata are: (a) early diagnosis and immediate operation; (b) properly placed, adequate incisions, draining all collections of pus; (c) avoidance of unnecessary trauma; (d) early removal of drains; (e) early and continued active motion, and (f) prevention of secondary contamination of the infected sheath. [E. H. R.]

EXPERIMENTAL CORD CRUSHES

McVEIGH, J. F. (*Arch. of Surg.*, Nov., 1923), performed a large series of experimental crushes of the spinal cord in animals with the idea of determining the mechanical factors involved and subsequent changes in the areas of cord affected. His conclusions are as follows:

1. In partial lesions of the cord, there is usually not sufficient pressure to convert the cord at the site of lesion completely to pulp, and what little pulp is formed is not under sufficient pressure to track very far up and down the cord. That part of the adjacent cord which is invaded, however, is usually an area similar to that invaded in complete lesions, and the principles involved are the same.

2. Edema and hemorrhage are factors to be dealt with in partial lesions and concussions. Massive hemorrhages do not occur as a rule, and small scattered hemorrhages are most often observed. These are probably not extensive enough to produce serious injury, of themselves. Edema comes on within eight hours and attacks the dorsal white columns principally, but it is frequently quite marked in the lateral and anterior columns as well. Time is a factor, since edema seems more marked in proportion to the length of time the dog lives. A marked intrapial pressure is developed as the result of the edema. This becomes more evident when the dura and pia are incised and this pressure is released. Judging from the case in which the dura was nicked, it seems that operative procedure would cause a further destruction of the cord substance without the relief of the edema in areas of the cord often affected. The release of the pressure seems to have no effect in checking edema formation.

3. In complete lesions of the cord, the cord at the site of the lesion is reduced to a pulp and blood mixture, and the ends of the cord separate for a short interval. The pulp is forced into the segments above and below the lesion, and causes an increased intrapial pressure, which is released in one of two ways: either the pia ruptures or the pulp tracks up and down the cord until the intrapial pressure is relieved. After an interval, in cases in which the pia remains intact and the local pressure is relieved, a bloody mass returns and fills the gap between the separated ends. If local pressure is maintained, as would be the case in an uncorrected fracture dislocation, no return of pulp would be possible.

4. The area of the cord involved in complete lesions is the area of least resistance, located in the ventral part of the dorsal white columns and that part of the central gray matter dorsal to the central canal. This locality is chosen because of the weaker anatomic structure of this area as compared with other areas.

5. In complete lesions, the area of cord involved in the pulp invasion tends to be larger above the level of the injury in the lower cervical and upper dorsal regions, and consequently more damage results in such regions. This is probably true also in the region of the lumbar enlargement.

6. Liquefaction of the pulp and the area of the cord involved in the debris in complete lesions sets in after forty-eight hours; is progressing rapidly at the end of four days, and is completed within two weeks. Thus the syringomyelic cavity and symptoms above the level of the lesion and cavity below in many old cases of fracture of the spine are accounted for. The process is brought about by the rupture of or pressure on blood vessels supplying the involved area, and the pressure on the included nervous tissues which are pushed aside. The presence of an increasing number of ameboid and granule glial cells in this area suggests their phagocytic function.

[E. H. R.]

REPORT ON FIVE CASES OF PAGET'S DEFORMING OSTEO-MYELITIS

ELY, L. W. (*Arch. of Surg.*, Nov., 1923), presents a report in detail of five cases of deforming osteomyelitis involving principally the femora, and presents very adequate x-ray pictures and photographs of the patients. He believes this to be a chronic inflammation of the bone marrow akin to that found in the second great type of arthritis, involving many or single bones. It occurs in middle or later life, affects men more often than women, and is probably caused by a non-bacterial organism which gains access to the system through the sockets of dead teeth.

[E. H. R.]

A FUNDAMENTAL FACTOR IN THE RECURRENCE OF INGUINAL HERNIA

SEELIG, M. G., AND CHOUKE, K. S. (*Arch. of Surg.*, Nov., 1923), after considerable experimental work, which is well illustrated by drawings in their article, state definitely that the modern operation for the cure of inguinal hernia is attended with a disconcertingly high rate of recurrence. A normal muscle will not unite firmly with fascia or a ligament. It is, therefore, a useless procedure to suture the abdominal muscles to Poupart's ligament in the hope of buttressing the weak or ruptured abdominal wall. Fascia unites well with fascia. The weak abdominal wall should be strengthened by the use of one of the methods of securing fascia to fascia approximation.

[E. H. R.]

A CLINICAL AND PATHOLOGICAL STUDY OF TEN BONE TUMORS

MORTON, JOHN J., AND DUFFY, W. C. (*Arch. of Surg.*, Nov., 1923), present a very thorough and carefully planned report, extremely well illustrated by photographs and x-ray plates, of ten cases of bone tumor. The case histories are given in detail, the operation and pathological report, and a discussion of each case is presented. Frequent references to the literature bearing on each case are made. The article is worth considerable detail study.

The authors after this bit of work are impressed with the difficulties which confront the average surgeon in arriving at a proper diagnosis and deciding on the proper treatment in any group of bone tumors. They believe that the x-ray picture should not be trusted alone for diagnosis, as it is often misleading, nor is it wise to depend solely upon microscopic examination because, as Ewing says, "the gross anatomy of the lesion is often a safer guide than the variable and uncertain structure of a small piece of tissue." The surgeon who will make the fewest mistakes in these types of tumors will combine a knowledge of the gross and microscopic appearance and the clinical behavior of the common types of bone tumor. The authors believe that such an experience can only be gained through study of groups of cases such as is now being carried out by the Registry for Bone Sarcomas. They believe that such a Registry should present to surgeons colored pictures of the lesions involved, this being a very valuable piece of information. The possibilities of radio-therapy are appreciated, and it is believed that oftentimes such treatment should be undertaken rather than a radical amputation.

[E. H. R.]

A CLINICAL STUDY OF ACUTE STREPTOCOCCUS INFECTION OF THE PHARYNGEAL LYMPHOID TISSUE

FELTY AND HODGES (*Johns Hopkins Hosp. Bull.*, Oct., 1923) present the results of a series of investigations during the fall and winter of 1922-23 on the etiology, epidemiology, and prevention of acute strep-

tococcus infections, with special reference to acute tonsillitis. They took up etiology, clinical picture, course and termination, prognosis and complications, and differential diagnosis. In treatment, they believed the patient should be confined to bed, the intake of fluids greatly increased with a liquid or soft diet. Bowels should be moved freely. Dover's powder seems to give great relief. They recommend giving a combination of 10 gr. of Dover's powder with one gr. of codein and 10 gr. of phenacetin, which seem to be somewhat massive doses, particularly in regard to phenacetin. For local measures they recommend the use of the ice collar and condemn the use of the so-called stronger antiseptics such as argyrol and other silver salts, and believe that the less trauma is done to inflamed tissues the better. Vaccination with killed cultures of the hemolytic streptococcus seems to confer relative immunity.

[J. B. H.]

A CLINICAL EPIDEMIOLOGICAL STUDY OF ACUTE TONSILLITIS AND ACUTE UPPER RESPIRATORY INFECTIONS

HODGES, A. B. (*Johns Hopkins Hosp. Bull.*, Oct., 1923), presents a study of acute tonsillitis and acute upper respiratory infections, with the following conclusions:

1. Seasonal variation.
2. The significance of possible epidemiological factors, such as weather and the association with other acute upper respiratory infections.
3. The direct spread of the disease from patient to patient. It was found that tonsillitis was seasonal in its occurrence, that there was no relation demonstrable between weather conditions and the disease, and that the occurrence of acute tonsillitis, colds and acute pharyngitis ran parallel. It was very difficult to trace the direct spread of the disease from case to case.

[J. B. H.]

A STATISTICAL STUDY OF THE ETIOLOGY OF BENIGN HYPERTROPHY OF THE PROSTATE GLAND

GOVER, M. (*Johns Hopkins Hosp. Reports*, vol. xxi, fasciculus iv, 1923), with an elaborate monograph presents an exhaustive study on the subject of benign hypertrophy of the prostate gland. After a historical account, discussion of the problem and a collection and tabulation of data, she discusses the relation of prostatic hypertrophy to age, venereal history, heredity, social status, past history, and the heart and blood pressure. The mean age at operation in these cases was 66.7 years, and the mean age at onset of symptoms 60.2 years. The history of gonorrhea among hospital cases of prostatic hypertrophy was approximately one-third. There are not enough figures to warrant any conclusions in regard to heredity as a factor in prostate gland hypertrophy. Single men are not as liable to have prostatic hypertrophy as married men. Previous infections of the genito-urinary tract are comparatively few. Use of alcohol has no relationship with the patient's size of prostate. Men who pursue sedentary occupations are no more likely to have greatly enlarged prostates than those engaged in more active work.

[J. B. H.]

CYANOSIS

LUNSGAARD AND VAN SLIKE (*Medicine*, February, 1923), in an interesting but somewhat unduly prolonged monograph, discuss the theoretical and clinical considerations involved in the production of cyanosis. After stating the actual cause of cyanosis, namely, an increased concentration of reduced hemoglobin in the capillary blood, the authors discuss in detail those factors which modify the degree of cyanosis, and the factors which actually determine an increased concentration of reduced hemoglobin in

the capillaries. The so-called modifying factors are the thickness of the epidermis, the normal or pathological pigment of the skin, normal and pathological variations in the color of the blood plasma, variations in the concentration of oxidized hemoglobin in the blood, variations in number, width and length of blood-filled capillaries, and variations in the extent to which the average capillary blood approximates the degree of unsaturation of the arterial or the venous blood. These modifying factors cannot produce cyanosis, but can modify the amount of oxygen necessary to produce it, or can modify the shade of color produced.

Four conditions are enumerated as causing an increased concentration of reduced hemoglobin in the capillaries. They are, according to the authors: (1) the total hemoglobin content, (2) the degree of oxygen unsaturation of the arterial blood coming from aerated lung areas, (3) the proportion of blood passing from the right heart to the left through un-aerated channels, and (4) the oxygen consumed in the capillaries. A very detailed theoretical discussion follows, on the importance and mechanism of each of the four main causes of an increase in the capillary content of reduced hemoglobin. Numerous formulae and illustrations are given for the determination of the extent of each of the four factors. This discussion covers not only the action of each of the above causes, but attempts theoretically to show the result of interaction between them.

Turning from a strictly theoretical discussion, the authors attempt to correlate theory with actual clinical conditions in which cyanosis is a characteristic feature. Various lung diseases, heart complications, general anesthesia, fetal and infantile life, polycythemia, anemia, high altitude, and acro-cyanosis all are discussed in detail.

A short historical résumé of the subject follows. From a physiological point of view the article is of great interest. To the clinician it appears to be clouded in a mass of theoretical details which are not as yet supported by definite investigative findings. Of real importance, however, is the enumeration of the main causes of cyanosis, and of the modifying factors. A full bibliography is given. [C. M. J.]

LIVER ATROPHY

MILLER AND RUTHERFORD (*Quar. Jour. of Med.*, Oct., 1923) report on 16 cases of acute and subacute atrophy of the liver. They divide liver atrophy into three types: (1) acute, (2) subacute, and (3) multiple nodular hyperplasia.

The acute type corresponds to acute yellow atrophy, the liver showing only acute degenerative changes with necrosis. Clinically it terminates fatally in a few days.

In the subacute type the liver shows, in addition to necrosis, small-celled infiltration of the portal spaces, proliferation of the bile ducts, and early fibrosis. The liver is small, and red or reddish brown. This is the "acute red atrophy" of some writers. Clinically it runs a course of a week or two.

"Multiple nodular hyperplasia" is the name applied to the type usually called subacute. This represents an attempt at regeneration, with the formation of many nodular areas, like adenomas, which give the liver a remarkable appearance. The liver may be small, or increased in size. The writers believe that regeneration occurs chiefly from parenchyma cells that have escaped necrosis, though proliferation of the bile ducts may play a part. Clinically the course is variable and lasts for months or years. Jaundice may be present or absent. Enlargement of the spleen is common and ascites may occur. Many of these cases have been wrongly classified as cirrhosis. Death in this type usually occurs as the result of acute infections, while in the acute form it is due to "choleemia."

As to etiology, the authors noted the absence of any constant factor, and the frequency with which liver atrophy followed infections. [W. T.]

THE ETIOLOGY OF NEPHRITIS

NEWBURGH, L. H. (*Medicine*, Feb., 1923), in a rather interesting review of the subject, attempts to simplify the conception of nephritis, both as to etiology and as to terminology. In place of an elaborate classification, based on confusing histological, clinical, and laboratory findings, the author divides nephritis into three groups,—acute, subacute, and chronic. A brief clinical description of each of the three groups is given.

Acute nephritis is discussed as the direct result of an infectious process in the majority of cases. The overwhelming importance of streptococcus infections in causing acute nephritis is stressed. Renal damage in this type of case is best thought of as due to "poisons elaborated by the bacteria at a distance and carried by the blood stream to the kidney." The term, "acute renal poisoning," is applied to those occasional cases of "acute nephritis" due to the toxic action of heavy metals.

Subacute nephritis is described as a group of cases not typically acute or chronic, not beginning with acute nephritis, and without the signs or symptoms of chronic nephritis. The author frankly admits that this group is no more than a convenient clinical entity. These cases are usually associated with a history of infection, frequently focal in nature. Of great interest is the observation that in the writer's experience he has never seen a case cured by the removal of infectious foci.

"Nephrosis" is discussed, and the term is discarded "as there appears at present to be no adequate reason for classifying this condition as a disease of the kidney."

Chronic nephritis is roughly subdivided into two groups. The first group includes those cases that represent clearly the end stage of an acute or subacute nephritis of bacterial origin. After mentioning the fact that acute nephritis in childhood seldom results in a contracted kidney, Newburgh discusses the accumulated evidence of various investigators and concludes that apparently the chronic nephritis of younger adults (third and fourth decades) is the product of infection.

The second group of cases of chronic nephritis includes those cases seen in older adults. These cases are intimately associated with arteriosclerosis, but the relation between sclerosis of the vessels and the sclerosis of the kidney is as yet not at all clear. Histological evidence is absolutely inconclusive as to the actual relation between the two processes. The author, therefore, turns to animal experimentation for a plausible explanation of the renal and vascular changes. As a result of the findings in various dietary experiments he suggests that both arteriosclerosis and chronic renal disease may be caused by the same poison, neither one being the outcome of the other. Excessively high protein intake is emphasized as the most likely predisposing cause for the vascular and renal changes seen in cases of chronic nephritis in older adults. Infection undoubtedly acts as a contributing factor in the production of further changes in already damaged kidneys.

In conclusion the writer suggests "that chronic nephritis is, generally speaking, caused by the combined effect of infection and abuse of protein."

Although not conclusive, the paper is of real value as an attempt to place nephritis on a simpler and more logical footing. It intentionally avoids the cumbersome and often contradictory classifications of various authors, and presents a rather satisfactory working basis for clinical use. [C. M. J.]

MYOSITIS FIBROSA

BURTON, COWAN AND MILLER (*Quar. Jour. of Med.*, Oct., 1923) describe a case of the generalized form of this disease, of which they could find only five cases in the literature. A woman of 25 years began to have stiffness in the muscles during pregnancy. There was no pain. Almost all the muscles became involved, so that the patient became bedridden. Excision of a piece of muscle showed extensive increase of the interstitial tissue, with atrophy and hyaline and vacuolar degeneration of the muscle fibers, and patches of "active inflammatory reaction." Many of the fibers showed loss of transverse striation. The arteries showed a chronic arteritis.

The diagnosis is easily made from the characteristic woody feel of the muscles. Dermatomyositis is excluded by the lack of involvement of the skin.

The patient recovered with rest and massage, but a relapse occurred two years later, which yielded to the same measures. [W. T.]

THE LEVULOSE TEST OF LIVER FUNCTION

TALLERMANN (*Quar. Jour. of Med.*, Oct., 1923) has studied the effect of levulose on the blood sugar curve in normal persons, in pregnancy, and in a few cases of hepatic disease. He found it unnecessary to vary the dosage according to the weight of the patient, and used a routine dose of 45 gms. He measured the blood sugar before, and at half-hourly intervals up to 1½ hours after the taking of levulose. He found (as had others) that the ingestion of levulose by normal persons raises the level of the blood sugar only slightly, sometimes not at all, and that the renal threshold for this sugar was much lower than for glucose, lying at a blood-sugar value of about 120 mg. per 100 c.c. This fact renders the presence of levulosuria after the test of little diagnostic value.

In pregnancy, Tallermann found (with one exception) normal sugar curves, indicating that liver function was not disturbed. There was no ascertainable threshold for levulose in these patients, for it appeared in the urine in all of them.

He concludes that liver function is disturbed if the blood sugar rises above 135 mgs. after levulose, with a rise above the original level exceeding 30 mg., especially if the blood sugar is still high at the end of 1½ or 2 hours.

He also describes a method for estimating small amounts of sugar in the urine by means of sofranin, which is decolorized by carbohydrates. [W. T.]

ERYTHRO-EDEMA POLYNEURITIS

PATERSON AND GREENFIELD (*Quar. Jour. of Med.*, Oct., 1923) describe five cases of this new and interesting disease of children. Cases have been reported from Australia, America, and England. It affects children from the ages of 4 months up to 3½ years. There is usually a preceding febrile illness with coryza and bronchitis. Then after an interval of a few weeks, the child becomes irritable and sleeps badly, and a characteristic rash appears. The hands and feet, the nose and cheeks become swollen, red, and cold, appearing like raw beefsteak. Desquamation in fine flakes follows the rash. Itching is troublesome. There is marked anorexia and wasting, and excessive sweating. Leucocytosis is present.

The usual signs of neuritis are present; loss of the knee-jerks, pains in the legs and hands, and often loss of sensation. The muscles are flabby and the lower jaw hangs down from lack of tone, but there is no actual paralysis.

In two autopsies the authors found a polyneuritis involving mainly the peripheral parts of the nerves.

The prognosis is good, in the absence of intercurrent infections. [W. T.]

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WHAT OF THE GENERAL PRACTITIONER?

THE Boston *Herald*, in a recent editorial, has again remarked on the decreasing numbers of physicians being graduated, and particularly on the diminishing numbers of men available for general practice or willing to undertake it. It is entirely in place for the *Herald* thus to call attention again to the writing on the wall that we know exists. The standards of medical education have been raised; the number of schools has been decreased; the quacks are being eliminated, as they should be; and we are struggling through an age of specialization which gives better medical service to a few and deprives many of even the minimum amount that is their right.

The startling advances in medical knowledge of the last several years have had this general tendency to specialization as a natural consequence. It has become quite impossible for an individual to keep abreast of all the information that has been added to our general storehouse of knowledge; it is becoming increasingly difficult even to keep up with a specialty, so rapidly have these advances taken place and so great has become the total amount to be learned. Many have felt that the general practitioner was in

danger of being driven from the field, and some have even considered this to be his proper fate.

The general practitioner is a necessity in a civilized, humanitarian State. Specialization may have encroached upon his field but it cannot take his place, for it has nothing to offer as a substitute for what it would cause to be discarded—the knowledge of the individual which can be gained only by prolonged individual contact and experience. The individual patient wants a physician trained to an understanding of human suffering, tempered with the wisdom of experience, to be his friend and guide: “to cure sometimes, to relieve often, to console always.” No mere specialist can perform all these duties.

In small communities and rural districts the need of the practitioner is paramount, and even in the cities no substitute can fill his place. The highly developed training of the specialist is as necessary, but it should be used in his proper rôle of consultant.

The drift towards the cities is largely responsible for the dearth of physicians, as well as of men trained in other walks of life in the country. The rewards there are greater, though many do not gain them. The lack of medical men in the rural districts is only a reflection of one of the greatest economic problems of our time—a problem that Page sought to bring home to Wilson on his first election, and one the solution of which was prevented by the Great War. The question of medical service for our country sections will be solved when this economic problem is solved and the tendency to drift to the cities is stopped, and not until then. When that time comes the rewards of a prosperous country practice in a prosperous countryside will again be appreciated and will again be sought.

PROPER DISPENSING OF MILK

THE Chicago Department of Health has issued an order, taking effect on the fifteenth of November, 1923, requiring that all milk sold to the public by coffee houses, restaurants, lunch rooms and elsewhere shall be served to the consumers in the original containers. This order is the result of an investigation carried on in the summer months of this year, in which approximately 50 per cent. of the samples of milk examined were found to be below standard.

As a part of its investigation the Department of Health sent out questionnaires to the health authorities of twelve large cities, and elicited the following information:

Sacramento was one of the pioneer cities in requiring the sale of milk in original containers. Since this ordinance took effect the consumption of milk has increased from 12 to 23 per cent.

Los Angeles reported that beginning August

21, 1923, the state law required that all milk served at restaurants, etc., must be in the original bottle and opened in the presence of the consumer.

In Boston some of the first-class restaurants sell milk by the bottle. The restaurant keepers do not have the right to sell milk in any form to take out.

Detroit reported that in hotels and restaurants milk is allowed to be dipped.

Baltimore requires all liquid milk to be served in the original container.

New York has no regulations prohibiting the sale of dipped milk in the city and admits that 50 per cent. of the milk sold in the city is dipped.

St. Louis, San Francisco, and Cleveland provide for the sale of milk only in the original containers; Buffalo, Milwaukee, and Philadelphia do not require milk to be dispensed in this manner.

In summarizing this question the commissioner stated that:

"(1) If the consumer demands milk served in individual containers he will receive it.

"(2) To possess its greatest food value, milk must have all of its ingredients in the right proportion.

"(3) Servings of milk from bulk containers have unequal food value, unless the container is sufficiently agitated.

"(4) The danger of contamination by unclean handlers can be avoided by dispensing milk in individual bottles properly filled and capped.

"(5) Serving milk in individual containers is the best guaranty of purity and proper content."

THE DORMITORY—A MONUMENT OF SERVICE

It is hoped that various units of the new dormitory for the Harvard Medical School will be donated as permanent memorials to men whose influence has been great and whose accomplishments have been appreciated. This idea, as we have intimated, has already been seized upon by the undergraduates of the School in their desire to do honor to their fellow student at Toronto.

The majority of such memorial gifts, however, will be dedicated to graduates of the School whose duties have been laid down and whose usefulness, except as an inspiration to others, is forever ended. Many of the great names associated with the Harvard Medical School have also been associated with the Medicine of Boston, for it was in this community, a community peculiarly enriched with families whose succeeding generations have been represented in the brotherhood of physicians, that many of them lived their lives and did their work.

There is no doubt that a number of those outstanding graduates of the past will be forever memorialized, as they should be, in the dormitory. They served the School and they served their community well, and their services must be recognized.

We must not forget, however, that the Medical School is no longer a provincial institution, dedicated chiefly to the service of its environs. Its influence has extended to all parts of the globe, and its graduates are carrying on its ideals in many scattered communities the country over. The training of numbers of those finest products of our profession—the general practitioners—was derived from the Harvard Medical School. Lesser communities and smaller centers than Boston have their Bigelows, their Shattucks, their Warrens, and their Jacksons. It is altogether fitting that these communities should see the propriety of memorializing their friends and leaders also, at the School which prepared them for their work, for it is hoped that many of the future occupants of the rooms thus dedicated will go forth and do likewise.

Let this come as a concrete suggestion. Those of us who were trained at the Harvard Medical School believe in our school; we all believe in the nobility of our profession. There can be no more fitting monument to those many men whose lives have been devoted to service than the center of activities of the training ground of those who must take their places. Let them but know of it, and the people whom they served cannot fail to take a proper interest in such an opportunity.

(Attention is called to Dr. D. L. Edsall's letter on page 961.)

A YEAR'S PROGRESS IN VENEREAL DISEASE CONTROL

The report of the work of the United States Public Health Service, Division of Venereal Disease, for the year ending June 30, 1923, is summarized in the publication *Venereal Disease Information*, which is published every month by that department. It is believed that there has been a decrease in the number of new infections during the past year, although the number reported by physicians was somewhat greater than the year previous. This increase in new infections reported by physicians to their State Boards of Health amounted to 4963, an increase of 1 per cent. over the number reported in 1922. It is rather surprising that there were 172,258 cases of syphilis against 156,826 cases of gonorrhea and 7777 cases of chancroid. The general belief is that syphilis occurs with considerable less frequency than does gonorrhea. It may be that many physicians neglect to report the latter

disease, while they do report syphilis, because they feel that syphilis is more dangerous to the public.

The appropriation by Congress to the Division of Venereal Disease has decreased from \$400,000 for 1923 to \$227,353 for 1924. In 1923, the various States appropriated over \$8,000,000 for use in controlling venereal disease. The clinics for treatment of venereal disease seem to be functioning as well as in previous years. A course has been given at the Public Health Service Clinic in Hot Springs, Arkansas, for the instruction of medical men in the administration of venereal clinics and in the diagnosis and treatment of venereal disease.

The educational part of the program has been responsible for the distribution of over a million and a half pamphlets. A manual on High Schools and Sex Education, which has caused universally favorable comment, has been prepared and distributed to educators. A 12-reel film entitled "Science of Life," has been completed and shown in various States. A book for mayors, dealing with their part in the campaign against venereal disease, has been prepared and 827 copies have been distributed.

The report as a whole indicates steady progress towards the control of the venereal diseases. The two main points of attack are through prevention by education, and rapid and complete cure of those infected.

THE APPOINTMENT OF DR. BLACKFAN

DR. KENNETH DANIEL BLACKFAN has been appointed to the positions of Professor of Pediatrics at the Harvard Medical School and Chief of the Medical Service at the Infants' and Children's Hospital.

He was born September 9, 1883, and after preliminary education graduated in medicine from the Albany Medical College in 1905. After graduation he served as pathologist to the Albany Hospital and bacteriologist in the Bender Laboratory, 1905-1906. He was engaged in general practice in Cambridge, N. Y., 1906-1909. From there he went to Philadelphia and was resident in charge, St. Vincent de Paul Foundling Hospital, Philadelphia, 1910-1911. Removing to St. Louis, he held the position of Resident Pediatrician in the St. Louis Children's Hospital and Assistant in Pediatrics in Washington University (St. Louis) 1911-1912. He then occupied the position first of Resident Pediatrician, then Instructor in Pediatrics, and later Associate in and Associate Professor in Pediatrics, Johns Hopkins University, 1912-1920. From 1920 to 1923 he was Professor in Pediatrics in the College of Medicine, Univer-

sity of Cincinnati, resigning to take up his work in Boston. He is the author of nearly thirty scientific articles relating to pediatrics, most of which have been published in the *Journal of the American Medical Association*, *American Journal of the Diseases of Children*, *Transactions of the American Pediatric Society*, *Journal of Biological Chemistry*, *American Journal of Medical Sciences*, and other scientific publications.

Dr. Blackfan's coming to Boston adds to the large number of scientific writers, research workers, and practitioners in special fields in this vicinity. His reception by the profession has been most cordial. We hope that Dr. Blackfan will honor this JOURNAL by frequent contributions to our columns.

WHO OR WHAT IS A CHROMOPATH?

THIS question was asked of us recently? Fortunately one of the editorial staff has such a wide acquaintance that he was able to give the information. According to him a chromopath is a healer who employs various colored lights in the treatment of his patients. This may be an offshoot of the Abrams theories, one of which is that red cures cancer. When this latter idea was referred to, one of the students in an office where the Abrams methods were being taught naively asked if it would not be well for us to use red underwear.

SMALLPOX AND VACCINATION

In an analysis of 163 cases of smallpox in Doncaster, England, occurring in the period between October, 1922, and August, 1923, Dr. B. Lyons, one of the health officers, gives the conclusions as follows:

It is seen that of the 163 cases, 107 had never been vaccinated; and to this number should be added the 23 patients unvaccinated at the time of exposure, making 130 unvaccinated patients. Of the 33 vaccinated, all vaccinations had been done in infancy, and three had been revaccinated 16, 29, and 40 years previously. The table shows that only two vaccinated patients under 30 years of age contracted the disease, one of them being 27 and the other 28 years old.

The antivaccinationists will probably argue from this that vaccination does not protect, but any statistician with an open mind in making a comparison of smallpox cases among exposed unvaccinated patients with the number occurring in successfully vaccinated persons under the same conditions would concede the value of vaccination.

MORTALITY STATISTICS

THE Metropolitan Life Insurance Company reports the death rate of the third quarter of 1923 as 7.4 per 1000. This, they announce, is the lowest mortality ever recorded for any three months' period in this important cross-section of the American and Canadian populations. A further reduction of the mortality from typhoid fever, in 1923, to a new minimum is anticipated. A substantial reduction in the tuberculosis death rate is being experienced, as is a reduction in the death rate for diseases incidental to pregnancy and childbirth. The measles and whooping cough death rates are higher for the first nine months of 1923 than prevailed during the first nine months of 1922 and 1921, but the outstanding bad spot in the mortality record has been due to deaths from violence. A small decline in homicides among the white policy holders has been accompanied by a rise of 23 per cent. among the colored; in respect to accidents, the record shows considerable increases among both white and colored policy holders. This is particularly true of automobile fatalities, for which there was a rise of 8 per cent. among the whites and 53 per cent. among the colored. The rate for suicides is practically unchanged.

Miscellany

THE MASSACHUSETTS TUBERCULOSIS LEAGUE AND THE CHRISTMAS SEAL SALE

PROFESSOR C.-E. A. WINSLOW in the December number of *Hygeia* asks, "Is it not worth while to mobilize our forces effectively against so deadly a foe" (tuberculosis)? "Is it not the duty, not only of every physician, but of every intelligent layman, to know something of the extent and the adequacy of the defenses of his own community against this controllable disease and to see that those defenses are strengthened at the points where they are weak?"

The great purpose of the voluntary anti-tuberculosis movement is to "mobilize" the people in this great fight to make public health work so efficient that tuberculosis will be stamped out. The rapidly declining mortality rate throughout the country indicates that the work is worth while. In Massachusetts in 1922 there were 2000 fewer deaths from tuberculosis than in 1918. It is, furthermore, confidently believed by those engaged in the work that this remarkable showing is to a large extent due to the organized voluntary movement.

The voluntary effort in Massachusetts is well abreast of the most progressive work of the country. The Massachusetts Tuberculosis

League has federated with it 24 county and city organizations, which in turn comprise more than 300 local committees. The State is now completely organized on the county and district



basis, with the exception of Essex County, where it is hoped a county organization will be formed in the near future. All but two of these county associations employ field nurses, who are coöperating with the State Department of Health in the promotion of examination clinics for underweight school children. During the present year 120 such clinics have been held in 90 cities and towns, at which clinics approximately 7500 delicate school children have been examined by state and county experts. At these clinics, 100 children have been found with evidence of positive tuberculosis. Three hundred suspicious cases have been found, and 1200 cases have been recommended for further observation. Many of these children have been sent to Westfield State Sanatorium and other institutions for treatment, and hundreds have received medical and surgical attention, and are now on the road to health under expert medical and nutritional supervision. This means, incidentally, that hundreds of children are receiving their first thorough medical examination, and that the attention of the communities where these clinics were held has been called to the need for better supervision of the health of growing children.

Another very important feature of this work is the maintenance of summer health camps, which are coming to be quite numerous throughout the State, and the Prendergast Preventorium, supported by the Boston Tuberculosis Association.

The League and its affiliated organizations are also actively engaged in promoting health education, the most important feature of which is the stimulation of health habit formation through the Modern Health Crusade, which is gaining remarkable headway throughout the schools of the Commonwealth.

In addition to the financing of these special

lines of work, Christmas Seal money is used in many sections of the State for the encouragement of dental and child welfare clinics, adequate public health nursing service, nutrition work with delicate children, and the relief of the needy tuberculous.

This work is supported almost entirely by the annual sale of Health Christmas Seals. Last year \$146,000 was raised by the sale in Massachusetts, and \$175,000 must be secured during the present month in order to finance the voluntary work now in progress.

The medical profession of the State as a whole is giving splendid coöperation in the promotion of these clinics and work for delicate children, and also is lending its moral and active support to the organized movement. The coöperation of the readers of the JOURNAL is solicited in making the present Seal sale a success, and thus insuring the continuation of this great work.

BOSTON MEDICAL HISTORY CLUB

THE first meeting of the season was held at the Boston Medical Library on Monday, November 19, with an attendance of seventy, members and guests.

Dr. Hyman Morrison read a comprehensive paper on Carl Weigert (1845-1904), the eminent pathological anatomist. He described Weigert as a philosopher and deep thinker on medical subjects, as well as a genius in the fields of histological technique, and felt that many of his monographs were destined to be looked upon as classics. Weigert's methods of (1) differential staining with dyes, constantly improved and extended to include all the tissues of the body (and incidentally giving the first demonstration of bacteria in tissues), and of (2) making serial sections with a microtome revolutionized the study of pathology, and much of his work was the foundation or inspiration for further advances by other men, such as Koch and Paul Ehrlich. Along with his technical researches ran Weigert's constant endeavor to formulate the fundamental laws of disease phenomena, and many of his conclusions are the basis of pathology today.

Dr. Harvey Cushing gave an informal talk on "Dr. William Osler as a Bibliophile," quoting from letters, diaries, and notes now being used in preparation for his "Life of Sir William Osler." He showed that Dr. Osler's idea was to make each book a repository for everything connected with the author, a sort of association book containing letters, criticisms, and often notes in Osler's own handwriting. As a result, the cataloguing of such a library was a task requiring much thought and judgment, yet a

pleasure and refuge which sustained Dr. Osler during the war.

Dr. Cushing showed Dr. Osler's last work unfinished at the time of his death, but since then completed and recently published, his "Incunabulum Medicum." This is a complete list of medical incunabula before 1480, 217 works in all, and the conclusion drawn from a study of these books is that the mere printing of the books made little change in medical thought at the time, their influence not being felt until a generation later.

Dr. Timothy Leary showed a number of documents having to do with Dr. Benjamin Church, the first Surgeon-General of the American Army, in continuation of his paper read before the Medical History Club in April. These were obtained from various sources and include, among others, medical bills of Dr. Church. A report of his trial before the Board of Officers of General Sullivan's brigade, the famous cipher letter, for writing and despatching which Church was convicted, and a letter from one John Short, a convicted deserter and British spy, implicating Church. Of especial interest is the first call to enlist in the American Army signed by Church as chairman of the Committee of Safety, May, 1775. Dr. Leary discussed briefly the value of the testimony against Church, stating that the character of some of the witnesses themselves required study.

The next meeting of the Club will take place on Monday, December 19.

DINNER IN HONOR OF FOREIGN HEALTH OFFICERS

A DINNER was given on December 4 at the Hotel Commodore by the Rockefeller Foundation in honor of a group of health officers representing eighteen foreign governments, who for the past three months have been in the United States under the auspices of the Health Section of the League of Nations for the study and observation of various types of public health organization.

Dr. George E. Vincent, President of the Foundation, presided at the dinner. Dr. William H. Welch, Director of the Johns Hopkins University School of Hygiene and Public Health, in the absence of Dr. F. F. Russell, General Director of the Foundation's International Health Board, extended greetings to the foreign visitors on behalf of the public health workers of the United States. The other speakers were Mr. John D. Rockefeller, Jr., Chairman of the Board of Trustees of the Rockefeller Foundation; Dr. Hugh S. Cumming, Surgeon-General of the United States Public Health Service; Dr. Linsly R. Williams, Managing Director of the National Tuberculosis Association; Dr. W. S.

Rankin, State Health Officer, North Carolina; and Dr. Norman V. Lothian, of the Health Section of the League of Nations.

The visit of these health officials to the United States represents the third general interchange of public health personnel arranged by the Health Section of the League of Nations. The first took place in Belgium and Italy in 1922, and the second in England and Poland during February, March, and April, 1923.

In the present group are representatives delegated by their respective governments, among them many of the most eminent sanitarians in the world, from France, England, Italy, Russia, Poland, Spain, Holland, Belgium, Greece, Yugoslavia, Germany, Switzerland, Norway, Mexico, Salvador, Brazil, Chile, and Canada.

The system of international interchange of public health personnel was made possible by a contribution to the Health Section of the League of Nations from the International Health Board of the Rockefeller Foundation, amounting to \$60,080 a year, for a period of three years. The object of the plan is to bring the public health personnel of different countries into closer relationship with each other, to effect a mutually profitable exchange of views on health subjects, to make comparative studies of health organization and legislation in different countries, and to promote international coöperation in establishing uniform standards for public health regulations.

UNITED STATES PUBLIC HEALTH SERVICE. PRIZES FOR CITIES WITH MOST COMPLETE COMMUNITY HEALTH SERVICE

AN important coöperative enterprise of the United States Public Health Service is the establishment of a joint office with the American Public Health Association, where health officers and others can obtain the latest scientific information on municipal health department practice. The American Public Health Association has had a committee for three years studying this subject. The work of the committee was generously financed by the Metropolitan Life Insurance Company, and the U. S. Public Health Service has set its official seal of approval on its work by coöperating in these studies and publishing, through the Government Printing Office, the committee's complete report. This report is the record of a survey, begun in 1920, of health department practices in eighty-three of the largest cities of the country. The results of the survey are summarized in the publication and constitute a manual of public health procedure of incalculable merit.

The establishment of an office of administrative public health in Baltimore, under the direc-

tion of Surgeon Paul Preble, is the next step in its scheme of coöperation. Here information already obtained by the committee will be placed on file and will be kept up to date, as Dr. Watson S. Rankin, the committee's field secretary, conducts additional research. Dr. Rankin's time will be spent in the field visiting cities for the purpose of assisting such as desire his services, in organizing various branches of their health work. The data in the Baltimore office and Dr. Rankin's services will be available at all times to any city that wants guidance in developing its local health work. A system of grading cities as to their effectiveness in health work will be devised, as a basis for determining the three cities that are to be awarded for the most complete community health service. The awards are offered by the American Public Health Association, and will be presented at its fifty-third annual meeting in Detroit in 1924.

OFFICIAL MANSLAUGHTER

"OFFICIAL MANSLAUGHTER" is the caption used by an editorial writer in *The Canadian Engineer* in commenting on the failure of municipal officials to safeguard their water supply. California has established a precedent for legal action in such cases. In June and July, 1920, about 150 cases of typhoid fever occurred in Pittsburgh, California. It developed that, due to a lack of liquid chlorin, water from the Sacramento River was pumped into the main for at least a day without being sterilized, and the epidemic followed. Eighteen of the victims sued the city for damages and were awarded a total of \$32,821.

THE LAWRENCE MEDICAL CLUB

THE monthly meeting of the Club was held Monday evening, November 26, with Dr. G. B. Sargent, at the Nurses' Home, Lawrence General Hospital. The chairman for the evening was Dr. T. V. Uniac. Subject: "Relation of Surgery to the Medical Treatment of Gastric and Duodenal Ulcers." F. H. Lahey, M.D., Boston.

REVACCINATION MADE OBLIGATORY

ACCORDING to information dated July 19, 1923, the Senate of Uruguay confirmed, on July 3, 1923, the obligatory revaccination bill, which requires obligatory revaccination every ten years. The bill was stated to be an extension of the obligatory vaccination law previously in force.—*Cincinnati Journal of Medicine*.

THE MENACE OF THE MATTRESS

THE Chicago Department of Health is inaugurating an active campaign against illicit traffic in insanitary and disease-laden mattresses. Evidence has been collected showing that discarded mattresses in great quantities, infected with vermin and contaminated with pathogenic bacteria are being constantly collected by junk dealers and made over into new mattresses without cleaning or sterilization. The dangers of this practice are forcefully commented on.

ADMISSION OF PATIENTS TO THE
BOSTON PSYCHOPATHIC HOSPITAL

FOR the benefit of physicians unfamiliar with the procedure necessary to have a patient admitted to the Boston Psychopathic Hospital for temporary care and observation, we wish to give the following directions:

Fill out the Temporary Care Paper, Form 79, and sign it. Have this paper accompany the patient to the hospital. The hospital will be unable to admit the patient without the proper papers. These blank forms may be obtained upon request from the Boston Psychopathic Hospital or the Department of Mental Diseases, Room 109, State House.

It is suggested that the physician before sending a case to the hospital communicate with the Executive Office, Brookline 4900.

THE BOSTON DISPENSARY—
CLINICAL MEETING

At the November meeting of the Medical Staff of the Boston Dispensary, presided over by Dr. H. J. Inglis, president, the following clinical program was presented:

A Case of Lymphoblastoma. Drs. Hilbert F. Day, Elmer W. Barron, Harry F. Friedman, W. A. Hinton.

Calcareous Deposits in the Skin and Subcutaneous Tissue of a Child. Dr. Henry J. Perry.

A Case of Complete Heart Block. Dr. William E. Preble.

Glaucoma. Dr. Joseph J. Skirball.

A Case of Post-Paralytic Squint. Dr. James J. Regan.

A Case of Dextrocardia, Dr. Louis I. Skirball.

A Case of Congenital Stridulus. Dr. Edmund B. Fitzgerald.

A Case for Diagnosis. Dr. Maynard Ladd.

Fractures. Dr. John D. Adams.

Obituary

DEATH OF PAUL CARSON, M.D., FORMER
PORT PHYSICIAN OF BOSTON

DR. PAUL CARSON died November 27, 1923, at his home, 137 Peterborough Street, Boston. Funeral services were held at Mt. Auburn Chapel at 2 p.m., Friday, November 30.

Dr. Carson was born in Akron, Ohio, but when a child moved to Randolph, New York. He graduated from Dartmouth College in 1891 and from the Dartmouth Medical School in 1894.

In 1896 Dr. Carson was appointed Assistant Port Physician of Boston and physician at Deer Island; and in December of the same year was promoted to the position of Port Physician, with offices, quarters, hospital and laboratory at Gallip's Island, Boston Harbor. He served in this position for fifteen years, and in 1911 was appointed Chief of the Division of Child Hygiene of the Boston Health Department which he organized. He later resigned this position to take up private practice and to engage in special work for the United Fruit Company in connection with South American sanitary and medical conditions. During 1921 and 1922, in emergencies, he also served the Boston Health Department as medical inspector, but failing health compelled him to discontinue this work.

Dr. Carson was an expert on the diagnosis and treatment of smallpox, and other Asiatic diseases, and handled hundreds of cases of smallpox during the epidemic of 1900 and 1902 which were removed from incoming trans-Atlantic liners by him before entering the port because of their illness. Up to the time the U. S. Public Health Service took over the quarantine station at Gallip's Island, all cases of leprosy were cared for by Dr. Carson at the hospital and detention quarters on the Island.

Dr. Carson was a big man physically and mentally. His physical stature was an indication of the depth of his character, his fine nature, and sunny disposition. He had an intimate and extended friendship with the masters of all ships and steamers entering Boston Harbor from all parts of the world; and to them, as to his friends ashore, Dr. Carson was familiarly known as "Kit."

News Items

TUFTS COLLEGE MEDICAL SCHOOL.—On Friday, November 23, Dr. Allan Chotard Eustis, Professor of Dietetics and Nutrition in the Graduate School of Medicine, Tulane University, gave an illustrated lecture on "Intestinal

Toxemia" to the fourth year students of Tufts College Medical School.

WEEK'S DEATH RATE IN BOSTON.—During the week ending November 24, 1923, the number of deaths reported was 194, against 226 last year, with a rate of 13.09. There were 27 deaths under one year of age, against 33 last year.

The number of cases of principal reportable diseases were: Diphtheria, 68; scarlet fever, 91; measles, 43; whooping cough, 6; typhoid fever, 1; tuberculosis, 43.

Included in the above were the following cases of non-residents: Diphtheria, 1; scarlet fever, 13; measles, 1; typhoid fever, 1; tuberculosis, 5.

Total deaths from these diseases were: Diphtheria, 2; scarlet fever, 1; tuberculosis, 10.

Included in the above was the following case of a non-resident: Scarlet fever, 1.

Correspondence

LONDON LETTER

(From Our Own Correspondent)

London, October 25.

PANEL PRACTICE IN ENGLAND

Medical practice under the Insurance Act, generally known as panel practice, is in a state somewhat resembling chaos at the present time. For some time there has been dissatisfaction both on the part of the medical men and on the panel of at least some of their patients. The dissatisfaction on the part of the doctors has been owing to the fact that their rate of remuneration was something of an unknown quantity, subject to sudden reduction, but chiefly because of the attitude of the associated societies. A considerable number of the patients were of the opinion that the medical service, on the whole, was not satisfactory. Now a crisis has been reached. The Ministry of Health have acquiesced in the reduction of the medical man's fee, while the approved societies, the members of which constitute perhaps the bulk of the panel patients, deem that the meager amount which has now been decided upon as the yearly medical fee is too much and further contend that if the societies contribute to the fee that they ought to have a say as to the manner in which the medical service is conducted. An interesting turn to the controversy has been introduced by a statement issued recently by Dr. Robert J. Farman, secretary of the County of London panel doctors. He said that he thought that they would be prepared to take the money offered, if they knew that the approved societies were out of it. He went on to say that he wished it to be clearly understood that it was not a fight for a shilling, the amount of the reduction, but a fight to get out of the control of the approved societies. He believed that if they had an assurance that they were not going to have any interference from the societies, there would be no talk of a strike. Dr. Alfred Cox, medical secretary of the British Medical Association, speaking in the same strain said: "They did not mind the societies looking after their own job, so long as they will leave the doctors to look after their job, which was the distribution of

sickness and maternity benefits. They never have had anything to do with the administration of medical benefit, excepting as far as they are on the Insurance Committee. But one of their leaders, who is one of the most sane men in the societies, has said that the administration of the approved societies should have a larger share in determining what fees are to be." Dr. Cox ended by saying that the panel practitioners would rather die than be run by the societies. That had been troubling the doctors more than anything else for a long time. Indeed, this appears to be the crux of the question.

The societies seem to wish to dominate the panel practitioners, and it also seems that if they are allowed to do so, it will be more than the insertion of the thin edge of the wedge leading to a State Medical Service, the goal which labor men generally are trying to reach. Unfortunately medical men are weak politically, and, of course, labor men are strong in this direction, and therefore it may be in the best interests of the medical profession if the panel system passes away. It must be borne in mind that the panel system has never found favor with a large and very influential portion of the British medical profession, and in this connection a statement sent forth by the National Medical Union is distinctly illuminating. This union is a body of practitioners who have declined to serve under the panel system, the president of which is Dr. A. Blackhall-Morison. In this statement it is pointed out that less than half the medical profession of England is concerned in the panel practice dispute. The large body in the profession, represented by the National Medical Union, stands entirely outside the orbit of the dispute. It is pointed out that it is one of the main planks in the policy of the union that in case of any distribution of the huge sums accumulated as a surplus out of the compulsory contributions under the Insurance Acts, the claims of the voluntary hospitals should be recognized. It was not too much to say that they did a large amount of the work for which panel practitioners were paid. It was now accepted that very many cases of gravity or complication arising among insured patients were at once relegated to the nearest voluntary hospital for treatment. This state of affairs was not equitable, and the National Medical Union strongly urged inquiry into this matter. The present controversy, with all its implications, opened up a favorable opportunity for a complete inquiry by Royal Commission into the whole working of the Insurance Acts. In the meantime about 90 per cent. of the total number of panel practitioners have resigned.

ATTACK ON PROHIBITION BY A GREAT MEDICAL AUTHORITY

Sir Archdall Reid, one of the greatest authorities in the world on heredity, and who has also studied closely the question of alcohol, read a paper entitled "The Prohibition Fallacy," at the opening session of the Lique Internationale des Adversaires des Prohibitions, held in London on October 24. He pointed out that many races of men were exceedingly susceptible to the attraction of alcohol. As a rule men were moderate or immoderate in proportion to their susceptibility to the charm of alcohol. Every human race was resistant to that charm precisely in proportion to the length and severity of its past experience of alcohol. When governments tried to enforce prohibition they entered into a fight against nature in which they were always beaten in the long run. They could not give a mortal law immortal permanence, and the longer their temporary success the more disastrous was the ultimate failure. Since a race which had undergone evolution did not stand still when the causes of evolution were withdrawn, but on the contrary retrogressed towards a primitive type, it followed that prohibition made a race of drunkards.

Sir Archdall Reid was emphatic on the point that the habitual drunkard should be restrained in every way. When he was found he must be kept sober, forcibly, if necessary. In addition forbid children to him. True temperance reform required the elimination, not of drink, but of the excessive drinker. Delegates attended the conference from America, Portugal, France, Denmark, Belgium, Italy, the Netherlands, Sweden and Switzerland.

SIMPLE DIET THE MOST HEALTHY

Professor J. C. Drummond of University College, London, gave a lecture, on October 24, on diet at the Royal Institute of Public Health. At the recent meeting of the British Association in Liverpool, Dr. Monakton Copeman suggested that an excess of vitamins might be one of the causes of cancer, or might accentuate the development of cancer. Professor Drummond declared that all the experimental evidence available went to show that the restriction of vitamin supplies had no retarding influence on the growth of cancer, and might possibly even lessen the vitality of the patient. Our best sources of vitamins were the green leaves of plants. The case of cows, where vitamins were derived from the grass and conveyed through the milk, represented the secondary source, or storage of vitamins. Probably the best secondary source was cod liver oil. In this instance the vitamin had been formed originally by minute marine plants and transferred successfully through the bodies of several smaller marine animals, on which the cod feeds. Vitamins were essential constituents of our daily diet, but the whole tendency nowadays was towards the artificial, or, at any rate, away from nature. The tendency was in the wrong direction, and the summation of a number of such deficiencies meant a great deal to modern civilization. To counteract the tendency people should use as much fresh fruit, fresh milk, and green vegetables as possible in their regular dietary. Our safest course was to keep as close to nature as possible, while bearing in mind that vitamins must only be regarded as part of our essential food components, so that a mixed diet is probably the best for the average individual. In Great Britain at the present time the question of diet is bulking large. Recently, the relationship between cancer and civilization and especially its relationship with diet has been widely discussed. It is argued that by attention to diet cancer may be prevented in many cases from developing. Among those who hold to this theory is Sir Arbuthnot Lane, who claims that many diseases, including cancer, are largely, if not mainly, due to intestinal stasis, leading to auto-intoxication and consequent poisoning and devitalizing of the system. In this connection a book has been written by Alfred C. Jordan, C.B.E., M.D. (Cambridge), M.R.C.P. London, and published by Henry Frowde and Hodder and Stoughton, The Lancet Building, London. The work deals with chronic intestinal stasis, or, as Dr. Jordan terms it, "Lane's Disease," and abounds in graphic x-ray pictures. The volume is worthy of the subject and the author, who is, of course, an authority on radiography of world-wide reputation, and, it may be said, well known personally in America.

COMMENTS ON BEHAVIOR OF PHYSICIANS TOWARD EACH OTHER AND CERTAIN RE- ACTIONS DUE TO TUBERCULOSIS

Geneva, October 1, 1923.

Mr. Editor:

Dr. Walter G. Phippen's witty and sage remarks on "The Relation of the Specialist to the General Practitioner" in the August 9, 1923, issue of the JOURNAL induces me to suspect that the following

principles of deontology adopted by the Medical Syndicates of Hérault, France, will not be devoid of interest to your readers. Therefore, I shall only give Section D of the principles as they pertain to the duty of the physician towards his colleagues.

Art. XIV.—Adopt towards others the same attitude that *by reciprocity*, the physician should wish others to assume towards himself.

Art. XV.—When a physician settles in a place where other doctors live, he should call upon them, and they, in turn, should return the call.

Art. XVI.—It is absolutely forbidden to assume any attitude that might cause discredit of a colleague, especially in extra-medical spheres, and still more in a family to whom this colleague has given his professional care. Also the physician must not take into account—without at first making sure of their reality—unkind remarks that a third, and not always disinterested, person may pretend he has heard made by another physician.

Art. XVII.—In case of difficulty with a colleague, the physician should, in the first place, attempt to smooth over the disagreement by a personal overture, but if unsuccessful the President of the Syndicate should be made acquainted of the facts in order to resort to arbitration.

Art. XVIII.—A patient has perfect right to give or refuse his confidence in a physician, but no doctor should attempt to supplant a colleague.

Art. XIX.—Excepting the physician's office, which is neutral soil where anyone has a right to receive any patient, the doctor must not pay a visit upon an *unknown* patient until he has proof that the attending physician has been discharged.

Art. XX.—However, if called, in extreme urgency, to a patient undergoing treatment by another physician, or in absence of the attending physician, humanity requires that the duty of the physician should be to respond to the call. When the attending physician returns he is to be informed of the treatment carried out in his absence, and the physician called in should cease his visits. Immediate cessation of visits is imperative in cases where a physician has been called upon to take the place of a colleague during the latter's absence, upon his return.

Art. XXI.—To settle in a community, in which a physician has been asked to temporarily assume the practice of another, without at first obtaining the latter's tacit consent, or to continue to exercise his profession within a radius of a clientele that has been bought by one colleague from another, are both highly condemnable.

Art. XXII.—A physician who visits localities outside of the radius of his office practice on fixed days and time, commits a most reprehensible conduct, especially if other colleagues practice in the said localities.

Art. XXIII.—Is also an act of *disloyal competition*, the acceptance of professional fees lower than those current in a given locality. . . . The *cut-rate physician* invariably throws discredit upon Medicine and has nothing in common with the exercise of a discreet and prudent beneficence.

Art. XXIV.—All *collaboration among colleagues*, asked for by the attending physician or less commonly upon the request of patient or friends, should only be conducted in the patient's interest, whether it be a consultation or surgical operation.

Art. XXV.—Hence a consultation should never be asked for excepting when absolutely necessary. On the other hand, a consultation should never be refused, excepting in the case of professional indignity of the consultant.

In case of serious divergence of opinion during consultation the family should be advised of the fact, in order that a third physician may be called in as arbitrator. The attending physician, whose opinion

is not accepted by the patient, should retire from the case for his personal dignity.

Art. XXVI.—When the attending physician has himself selected the consultants or specialists, the latter should at once deliver in writing to the former the detailed results of their examination. Their special mission ended, they should never entertain direct relationship with the patient, especially for other therapeutic measures not belonging to their speciality.

Art. XXVII.—In case of operation, the surgeon, who alone is responsible, should distribute the respective parts to be played by his collaborators. But he should give an honorable part to the attending physician.

Art. XXVIII.—Experience has demonstrated that in order to avoid future unacceptable bickering, the fees should be paid cash. They are to be transacted directly between the patient or his family and the medical men and their assistants connected with the case.

Art. XXIX.—Any direct financial recompense from one physician to another, vulgarly designated by the name of dichotomy, is improper, since by its underhanded character it lends to the degrading suspicion of professional collusion. It is the patient who has received the benefits of professional skill who should honor each professional man who has collaborated in his case. But it is incumbent upon the physicians who are foremost in the case—consultant or surgeon—to openly state the quantum due to each when rendering the total sum due from the patient. . . .

Art. XXX.—When the attending physician prefers to deal directly with the family for his fee, any remuneration from the consultant or surgeon is illicit and in no circumstance can it be solicited.

Many more excellent articles could be given, but I have only brought those to notice which are more directly concerned with Dr. Phippen's remarks. Of course on the Continent a man is either an M.D. or nothing at all, so that there are no "paths," or other irregular practitioners to deal with, and this is why the *Continental profession as a whole* has a standing superior to all others.

A series of recent researches in France seems clearly to prove that pulmonary tuberculosis may cause unequal pupils, hence this process is quite capable in itself of producing anisocoria, thus offering a means of making an early diagnosis of incipient tuberculosis. Dr. Jullian, of Pau, has found that in unilateral pulmonary tuberculosis, spontaneous unilateral anisocoria existed in 26 per cent. of the cases. By adding to this number the number of cases detected by provoked mydriasis this observer found a total of 71.42 per cent. of anisocoria. This percentage need not impress one because Jullian points out that in four patients anisocoria existed before the mydriasis test and disappeared after it, so that the percentage drops to 64.28 per cent., and he also recalls the great delicacy of the test, which is rendered absolutely untrustworthy by the slightest errors on the part of patient or physician.

An apical site of the lesion is not essential for the production of anisocoria, while an apical lesion does not of necessity cause unequal pupils. Consequently, the anatomical theory which explains anisocoria by involvement of the pleural dome is not invariably true, and the reflex track may often be invoked in the genesis of the facts observed.

Spontaneous or provoked anisocoria in a subject with a unilateral pulmonary tuberculosis does not of necessity admit of a diagnosis of this morbid process. All parenchymatous affections of the lungs are susceptible of influencing the pupil on the same side as the lesion, and in proof of this unquestionable anisocoria has been found in cases of bronchial ectasis with pulmonary sclerosis, in a case of pulmonary

hydatid cyst and in one of gangrene of the left pulmonary base.

All things considered, the importance of the multiplicity of factors susceptible of influencing the pupils is the main lesson to be derived from these researches. But when there is a change in the patient's reflexes syphilis will be found to be the cause of the anisocoria, and not the tuberculosis. Finally, one should take into consideration all those diseases that can react upon the parasympathetics and their nerve origins.

Very truly yours,

CHARLES GREENE CUMSTON, M.D.,
Lecturer in the University of Geneva.

THE MALDEN HOSPITAL

Mr. Editor:

In order to complete the organization and standardization of the staff, it has been decided to terminate all outstanding permits to practice at the Hospital on December 1st, 1923. After that date permits to send patients and practice at the Hospital will be given only to those physicians who have made application therefor on the form provided for the purpose, and who, after approval of the application by the Executive Committee and the Medical Board, sign the register at the Hospital. This book contains the following provision:

"Any physician or surgeon who signs this register agrees thereby to practice in The Malden Hospital, according to the highest principles of the profession; to do clean, aseptic, conscientious work; to use every ability and means at his disposal for the welfare of the patient; and to recognize and conform to the By-Laws and Rules and Regulations of the Hospital; and to the authority of its Executive Committee and Medical Board, Superintendent and other officers, and not to split fees for services rendered."

If you desire to keep up your relations with the Hospital, please fill out the enclosed application, sign, and return it to me at once, and upon notification that it has been approved, also sign the register at the Hospital, so that you may be assigned to the staff.

Yours truly,

ROBERT W. FRENCH,
Secretary Medical Board.

MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

Bloomington, Ill., Nov. 22, 1923.

Mr. Editor:

The American Association for the Study of Goiter, composed of Goiter Surgeons, Pathologists, Anaesthetists, Internists, and Radiologists, will have its annual meeting in Bloomington, Illinois, the 23rd, 24th, and 25th. of next January.

Our program will not be complete until about the 17th of December. We expect, however, to have an excellent program of papers, demonstrations, and diagnostic and operative clinics.

Yours truly,

E. P. SLOAN, President.

THE HARVARD MEDICAL SCHOOL DORMITORY

November 21, 1923.

Dr. Francis M. Rackemann,
263 Beacon Street,
Boston, Massachusetts.

Dear Dr. Rackemann:

I want to express my pleasure and gratification at the action of the Committee in charge of the Dormi-

tory Fund, in having made definite plans for caring for graduates returning to the Medical School. That there will be provision for them in the projected dormitories, even to the extent of providing a certain number of rooms that may be occupied by them when temporarily here, if they so desire, seems to me extremely important and to be a very valuable provision for making the graduates of the school still feel at home and a part of the organization when they return. I have always been impressed when returning to the various places where I have worked as a student, with the sense of detachment and loneliness that one has as a graduate, as compared with the days when he was an undergraduate, and I hope that we can make arrangements here to overcome much of this; and this plan of the Committee seems to me a very happy and long step toward doing this.

With very kind regards,

Sincerely yours,

(signed) D. L. EDSALL, Dean.

Letter written by Dr. P. E. Truesdale, illustrating a method to be used in approaching possible contributors:

To the Friends of the Medical Profession:

A new departure in mode of living for students while spending four important years of study for a Doctor's Diploma is to be inaugurated at Harvard University.

Even in these days of advanced knowledge in education and sanitation the living conditions of most medical students are deplorable. So much that it is bad about them that one can readily visualize unhappy consequences in the building of a foundation upon which a doctor must depend for his life service to the sick.

The student who must economize, often rooms alone, eats alone, and has very little opportunity for helpful companionship among his fellow classmates. His living quarters are often unsanitary and his food far from the best. He is apt to succeed most in his economies by living in a small room and subsisting upon cheap food.

After graduating he is expected to approach the sick with a pleasing personality, a cheerful, hopeful countenance and an understanding of the amenities of life, none of which he has had opportunity to enjoy while a medical student. During four years he has lived in relative isolation. He, therefore, has fitted himself to practice medicine in the same way, making his own road to success longer, more laborious and less fruitful. He may never attain his ideals in practice because he became unfitted to do so during student life. He begins practice with restricted viewpoints instead of a liberal, open perspective.

Upon graduating he feels too strongly that he is no longer a student but a finished doctor whose essential aim is to enhance his income. By his student life he has become unfitted for agreeable and profitable associations among his fellows. Such influences woven into the life of the medical student for a period of four years cannot be offset by a year or two as hospital interne. So the young graduate begins actual practice with habits acquired in his medical school life which seriously handicap him in exercising his best capabilities for the welfare of his patients.

The Alumni Association of the Harvard Medical School, under the direction of the president, Dr. Elliott P. Joslin, has made a careful survey of the situation and proposes to cure the ills of medical student life by having the students themselves properly housed and fed, and thrown into more intimate association with each other.

In the proposed new Dormitory building, every effort will be made to improve the standards of living.

The arrangement of rooms, the squash courts, the gymnasium, the assembly hall, and a common dining-room will contribute much that is needed for the fullest development of all the faculties of the medical student for wise, liberal and sympathetic relationships in his professional life.

The building is to cost \$900,000.

The appeal for funds is made to all friends of the medical profession.

A gift of \$2500 made by an individual or group will provide for a memorial room with an appropriate tablet; \$16,500 for a unit of eight men, all on one floor; \$25,000 for a living-room; \$65,000 for an "entry," four stories high, accommodating 32 men; and \$100,000 for an assembly hall.

ACKNOWLEDGMENT OF BOOKS FOR REVIEW

The JOURNAL acknowledges the following books for review:

A Clinical Guide to Bedside Examination. By H. Elias, N. Jagie and A. Luger. New York: Rebman Co. 135 pages. Price \$1.50.

Procedures in Nursing. Annabella McCrae. Boston: Whitcomb and Barrows. 261 pages. Price \$1.50. Diseases of the Rectum and Colon and their Surgical Treatment. P. Lockhart-Mummery. New York: William Wood and Company. 872 pages. Price \$8.00 net.

Rules for Recovery from Tuberculosis. Lawrason Brown. Lea and Febiger. Philadelphia: 217 pages. \$1.50.

Physical Diagnosis. Richard C. Cabot. New York: William Wood and Company. 536 pages. Price \$5.00.

The Note Book of an Electro-Therapist. Liel R. Waggoner. McIntosh Electrical Corporation. Chicago: 173 pages. Price \$5.00.

Text-book of Chemistry for Nurses. Fredus N. Peters. St. Louis: C. V. Mosby Company. 302 pages. Price \$2.50.

Principles of Bacteriology. Arthur A. Eisenberg. St. Louis: C. V. Mosby Company. 214 pages. Price \$2.25.

Obstetrics for Nurses. Charles B. Reed. St. Louis: C. V. Mosby Company. 399 pages. Price \$3.50.

The Normal Child—Its Care and Feeding. Alan Brown. The Century Company. New York City. 254 pages. Price \$1.25.

Pharmaceutical Botany. Heber W. Youngken. 538 pages. Philadelphia: P. Blakiston's Son and Company. Price \$4.00.

Studies from the Rockefeller Institute for Medical Research. New York: Privately Printed. Volume xlv. 684 pages. Price \$2.00.

Medical Department of the U. S. Army in the World War. Volume I. The Surgeon General's Office. War Department, 1923. 1389 pages.

Die Methoden der Lokalanästhesie in der Bauchchirurgie und ihre Erfolge. Prof. Dr. Hans Einsterer. Urban und Schwarzenberg. Berlin and Vienna: 196 pages. Schw. Fr. 7, 5.

Papers on Psycho-Analysis. Ernest Jones. New York: William Wood and Company. 731 pages. Price \$8.00 net.

Habitual Constipation. Its Causes, Consequences, Prevention, and Rational Treatment. Ismar Boas (Translated by Thomas L. Stedman). New York: Funk and Wagnalls Company. 299 pages. Price \$2.00.

The Conquest of Nerves: A Manual of Self-Help. J. W. Courtney. New York: The Macmillan Company. 209 pages.

Rubber and Gutta Percha Injections. Charles Conrad Miller. Chicago: Oak Printing and Publishing Company. 99 pages. Price \$1.75, prepaid.

The Principles and Practice of Perimetry. Luther C. Peter. Philadelphia and New York: Lea and Febiger. 281 pages. Price \$4.00.

A Treatise on Orthopaedic Surgery. Royal Whitman. Philadelphia and New York: Lea and Febiger. 593 pages. Price \$9.00.

Diseases of the Skin. Frank Crozer Knowles. Philadelphia and New York: Lea and Febiger. 595 pages. Price \$6.50.

Individual Gymnastics. Lillian Curtis Drew. Second Edition. Philadelphia and New York: Lea and Febiger. 260 pages. Price \$2.00.

Modern Aspects of the Circulation in Health and Disease. Carl J. Wiggers. Philadelphia and New York: Lea and Febiger. 662 pages. Price \$7.50.

NOTICES

UNITED STATES CIVIL SERVICE EXAMINATION

JUNIOR MEDICAL OFFICER

Applications Will Be Rated as Received until
December 28, 1923

The United States Civil Service Commission announces an open competitive examination for junior medical officer. Vacancies in the positions of physician in the Indian Service, surgeon in the Coast and Geodetic Survey, and physician in the Panama Canal Service for duty outside of hospitals, at the salaries indicated below, and in positions requiring similar qualifications, at these or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

Indian Service.—The entrance salary for physician in the Indian Service ranges from \$1000 to \$1200 a year (plus bonus, see below), with quarters, heat, and light. Employees have the privilege of boarding at the common "mess" at a very low cost. The Government furnishes all drugs and equipment and means of transportation.

Coast and Geodetic Survey.—The entrance salary for surgeon in the Coast and Geodetic Survey is \$1400 a year (plus "bonus," see below), with allowance for subsistence at \$2 per diem while serving on board ship, except in the Philippines, where the allowance for subsistence is \$2.50 per diem. The number of surgeons in the Coast and Geodetic Survey actually employed and under pay at any time is eight. Three of these are employed in Alaska and on the Pacific Coast, four in the Philippines, and one on the Atlantic Coast and in Porto Rico. Officers serving in the Philippines are usually relieved at the end of two years. All surgeons are attached to vessels, and while their first duty is to conserve the health of the crew, it is expected that they will take part in the work of the Survey. Appointment will be confined to those who indicate willingness to accept service in any of the regions named.

Panama Canal.—The entrance salary for physician. Panama Canal Service, is \$250 a month; promotion may be made to \$275, \$300, \$325, and \$360, and to higher rates for special positions. The salary begins on the date of sailing for the Isthmus, and free furnished bachelor quarters are supplied on the Isthmus. Meals may be obtained at the Government restaurants on the Isthmus at 40 cents each and upward. Vacancies in the Canal Zone hospitals are filled by the detail of officers of the Medical Corps of the Army; openings for civilian physicians therefore occur only to the service outside of the hospitals proper and are few and infrequent.

Bonus.—Appointees at annual compensation of

\$2500 or less, whose services are satisfactory, may be allowed the increase granted by Congress of \$20 a month.

Citizenship and Sex.—All citizens of the United States who meet the requirements, both men and women, may enter these examinations; appointing officers, however, have the legal right to specify the sex desired in requesting certification of eligibles. For the Coast and Geodetic Survey men are desired.

On account of the needs of the service, papers will be rated as received and certification made as the needs of the service require. In the absence of further notice, applications for these examinations will be received until the hour of closing business on December 28, 1923. If sufficient eligibles are obtained, the receipt of applications may be closed before that time, in which case due notice will be given.

Subjects and Weights.—Competitors will not be required to report for examination at any place, but will be rated on the following subjects, which will have the relative weights indicated:

	Subjects	Weights
1. Education and training	30
2. Experience	70
Total	100

Basis of Ratings.—The ratings will be based upon competitors' sworn statements in their applications and upon corroborative evidence.

Claims of general or special experience must be corroborated by persons competent to judge of such experience who have known the applicant for the period vouched for.

Prerequisite Requirement.—Applicants must show that they have been graduated from a medical school of recognized standing; or be senior students in such institution and furnish, within six months from the date of making oath to the application, a statement from the proper official of the medical school attended attesting actual graduation.

For the Panama Canal Service, applicants must have been graduated from a medical school whose graduates are eligible for commission in the United States Army, and must have had at least one year's postgraduate hospital experience.

Age.—On the date of making oath to the application, applicants for the Indian Service must not have reached their fiftieth birthday, applicants for the Coast and Geodetic Survey must not have reached their forty-fifth birthday, and applicants for the Panama Canal Service must have reached their twenty-second but not their thirty-first birthday. These age limits do not apply to persons entitled to preference because of military or naval service, but such applicants must not have reached the retirement age.

Retirement.—Classified employees who have reached the retirement age and have served 15 years are entitled to retirement with an annuity. The retirement age for railway mail clerks is 62 years, for mechanics and post office clerks and carriers 65 years, and for others 70 years. A deduction of 2½ per cent. is made from the monthly salary to provide for this annuity, which will be returned to persons leaving the service before retirement with 4 per cent. interest compounded annually.

Photographs.—Applicants must submit with their applications their unmounted photographs, taken within two years, with their names written thereon. Proofs or group photographs will not be accepted. Photographs will not be returned to applicants.

Residence and Domicile.—Applicants will be admitted to this examination regardless of their residence and domicile; but only those who have been actually domiciled in the State or Territory in which they reside for at least one year previous to the date of making oath to the application, and who have the

county officer's certificate in the application form executed, may become eligible for permanent appointment to the apportioned service in Washington, D. C. *Medical Certificate.*—The medical certificate in the application form must be executed by a physician in the Federal service where possible.

Applications.—Applicants should at once apply for Forms 1312 and 2398, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Customhouse, Boston, Mass., New York, N. Y., New Orleans, La., Honolulu, Hawaii; Post Office, Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Calif., Denver, Colo., Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R.

Applications should be properly executed, *excluding both vouchers, but including the medical certificate*, and must be filed with the Civil Service Commission, Washington, D. C., without delay.

The exact title of the examination, as given at the head of this announcement, should be stated in the application form.

Preference.—Applicants entitled to preference because of military or naval service should *attach to their applications* their original discharge, or a photostat or certified copy thereof, or their official record of service. If, because of disability, the applicant is entitled to a pension under authorization of the Pension Bureau or to compensation or training under the Veterans' Bureau, he should also submit his pension certificate or a certified copy thereof, or a certificate from the Veterans' Bureau showing that he is entitled to compensation or training by that Bureau. Such papers will be returned to the applicant.

GOVERNMENT PRINTING OFFICE.

Reissued September 5, 1923.

NOTICE.—The annual directory of the Massachusetts Medical Society will be published as soon after January 1 as possible. Even with the greatest care the Secretary, Dr. Burrage, will be unable to make it 100 per cent. perfect unless the members cooperate. Every member, who has changed his place of residence, should notify the secretary promptly. If every member will look over the last directory, note any inaccuracy, and forward the information to Dr. Burrage, it will be appreciated and the value of the publication enhanced. Do it now!

BOSTON ORTHOPAEDIC SOCIETY ANNUAL MEETING

Symposium on Poliomyelitis. Boston Medical Library, Sprague Hall, Monday evening, December 10, 1923, 8:15.

Program

The Work of the Harvard Infantile Commission. Dr. Robert W. Lovett.

Experimental Work in Poliomyelitis. Dr. W. Lloyd Aycock.

Epidemiology of Poliomyelitis. Dr. Milton Rosenau.

Diagnosis of Poliomyelitis. Drs. Francis Peabody and Samuel Levine.

Orthopedic Treatment of Poliomyelitis. Drs. Arthur T. Legg and Harry Lowe.

Election of Officers.
Annual Dues.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

REVISED PROGRAM FOR THE REST OF THE YEAR

Essex Sanatorium, Middleton, Friday, January 7, 1924, 4 p. m.—Tuberculosis conference in conjunction with Essex North.

Lynn Hospital, January 23, 1924—Speaker, Dr. Frank H. Lahey of Boston. Subject, "The Relation of Surgery to the Medical Treatment of Gastric and Duodenal Ulcer."

Salem Hospital, March 19, 1924.

Annual meeting, Relay House, Nahant, May 7, 1924, in conjunction with Lynn Medical Fraternity.

RALPH E. STONE, Secretary.

SOCIETY MEETINGS

DISTRICT SOCIETIES

Bristol South District Medical Society:

The annual meeting will be held in New Bedford, May 1, 1924.

Essex North:—Semi-annual meeting at Haverhill, January 2, 1924. Annual meeting at Lawrence General Hospital, May 7, 1924.

Essex South District Medical Society:

January 7, 1924—Essex Sanatorium, Middleton, 4 p. m. Tuberculosis conference in conjunction with Essex North.

January 23, 1924—Lynn Hospital. Speaker, Dr. Frank H. Lahey of Boston.

March 19, 1924—Salem Hospital.

May 7, 1924—Annual meeting, Relay House, Nahant, in conjunction with Lynn Medical Fraternity.

Franklin District:—Society meets at Greenfield the second Tuesday of January, March, May, July, September. Annual meeting in May.

Hampden District:—The meetings for the year are as follows: January, 1924, at Springfield. April, 1924, at Springfield; annual meeting.

Hampshire District Medical Society:

Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.

Middlesex South District Medical Society:

December, 1923—Hospital Day, probably at the Cambridge Hospital.

January 30, 1924—Combined meeting with Suffolk District at the Boston Medical Library.

February 27, 1924—Combined meeting with the Surgical Section of Suffolk District at the Boston Medical Library.

March, 1924—Hospital meeting; place not yet determined.

April, 1924—Annual meeting.

Norfolk South District:—Meetings first Thursday of each month at 11.30 a. m., December, January, February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.

Suffolk District Medical Society:

December 19, 1923—Meeting of Medical Section at the Boston Medical Library at 8.15 p. m.

January 30, 1924—In association with the Boston Medical Library and the Middlesex South District Medical Society at the Boston Medical Library at 8.15 p. m.

February 27, 1924—Meeting of Surgical Section, in association with the Middlesex South District at the Boston Medical Library at 8.15 p. m.

March 26, 1924—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 8.15 p. m.

April 30, 1924—Annual meeting, to be held at the Boston Medical Library at 8.15 p. m.

Worcester District:—The meetings for the year are as follows: December 12 in Worcester. Papers by Dr. Fred B. Lund of Boston and Dr. Michael F. Fallon and Dr. Walter Seelye of Worcester.

January 9 at St. Vincent Hospital, Worcester.

February 13 at Memorial Hospital, Worcester.

March 13 at City Hospital, Worcester.

April 10—A public meeting.

May 8—Annual meeting.

STATE, INTERSTATE AND NATIONAL SOCIETIES

Schedule of meetings of the *New England Dermatological Society:*
Wednesday, December 12, 1923, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.

Wednesday, February 13, 1924, at 3 p. m., in the Skin Out-Patient Department, Massachusetts General Hospital.

Wednesday, April 9, 1924, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.